ORGANISATIONAL LEARNING THROUGH SCARCE SKILLS TRANSFER?

– a case study in the Eastern Cape Province

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DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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SUMMARY

Knowledge Transfer is one of the key knowledge management practices that organisations employ to ensure cross-pollination of knowledge across their various divisions. It should be a cornerstone of a learning organisation and should pervade the entire organisation in all its manifestations.

In general it is a question whether public sector organisations in South African are employing such practices in their quest to render services effectively, efficiently and economically.

This thesis focuses on an attempt at knowledge transfer in a department in an underdeveloped province, i.e. the Department of Roads and Public Works in the Eastern Cape. It centres on a case study of Cuban engineers who were contracted by the South African government to design and build infrastructure.

The thesis is divided into the following chapters:

Chapter 1: deals with the problem of knowledge transfer in a developing context. The chapter focuses on the objectives of the research and sketches a contextual backdrop to the study.

Chapter 2: discusses the key concepts of Learning, Organisational Learning, Knowledge, Knowledge Transfer, and Knowledge Transfer Strategies. It also identifies barriers to knowledge transfer and highlights a few suggestions on how to deal with those barriers.

Chapter 3: deals with the case study of six Cuban engineers and presents the results of the case study.

Chapter 4: describes some of the local initiatives taken by the Department to cater for the needed skills in their sector.

Chapter 5: evaluates the topic by bringing the literature discussed in chapter two to bear on the findings of the case study.

OPSOMMING

Kennisoordrag is een van die kern kennisbestuurspraktyke waardeur organisasies kruisbestuiwing van kennis oor 'n verskeidenheid onderafdelings moontlik maak. Dit behoort die basis van 'n 'learning organisation' te wees en die hele organisasie te deursuur.

In die algemeen is dit 'n vraag of publieke sektor organisasies in Suid-Afrika sodanige praktyke aanwend in hulle pogings om dienste te lewer.

Hierdie tesis fokus op 'n poging tot kennisoordrag in 'n departement wat in 'n onderontwikkelde provinsie in Suid-Afrika geleë is, naamlik die departement Paaie en Openbare Werke in die Oos-Kaap. Die tesis draai om 'n gevallestudie van Kubaanse ingenieurs wat deur die Suid-Afrikaanse regering gekontrakteer was om infrastruktuur te ontwerp en te bou.

Die tesis is verdeel in die volgende hoofstukke:

HOOFSTUK 1 handel oor die probleem van kennisoordrag binne 'n ontwikkelingskonteks. Dit sit die doel van die studie uiteen en beskryf die sosiale konteks daarvan.

HOOFSTUK 2 bespreek die kernkonsepte, naamlik Leer, Organisatorise Leer, Kennis, Kennisoordrag en Kennisoordragstrategieë. Dit identifiseer ook faktore wat kennisoordrag teenwerk en bespreek moontlike oplossings vir laasgenoemde probleem.

HOOFSTUK 3 behels 'n gevallestudie van 6 Kubaanse ingenieurs en bied die resultate daarvan aan.

HOOFSTUK 4 beskryf sommige lokale inisiatiewe deur die Department om kennisoordrag te bevorder.

HOOFSTUK 5 evalueer die onderwerp deur die literatuur in hoofstuk 2 in verband te bring met die gevallestudie.

ACKNOWLEDGEMENTS

First of all, I would like to thank my supervisor for his unwavering support and perseverance. Without that encouragement and support I would not have finished this thesis.

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Lastly but most importantly, I wish to extend my deepest sense of gratitude to the respondents that were interviewed at various intervals of this thesis. Not once did I feel that they were annoyed by me and the questionnaires I requested them to respond to. I also wish to say many thanks to any other people who participated in this research in one way or the other.

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Abbreviations

AHI	– Average Household Income
APTCoD	– Accelerated Professional Training and Competency Development
ASGISA	– Accelerated and Shared Growth Initiative of South Africa
AutoCAD	– Auto Computer – Aided Designs
CCM	– Coordination and Compliance Monitoring
CIDB	– Construction Industry Development Board
CIDP	– Construction Industry Development Programme
COSATU	– Congress of South African Trade Unions
CPA	– Cape Provincial Administration
DBSA	– Development Bank of Southern Africa
DoL	– Department of Labour
DPSA	– Department of Public Service and Administration
DRE	– District Roads Engineer
DRPW	– Department of Roads and Public Works
EPWP	– Expanded Public Works Programme
FET	– Further Education and Training
GDP	– Gross Domestic Product
GRPI	– Goals, Roles, Processes and Interpersonal relationships
ICT	– Information and Communication Technology
IPMA	– International Project Management Association
JIPSA	– Joint Initiative on Priority Skills Acquisition
MEC	– Member of the Executive Council
MPL	– Member of the Provincial Legislature
NBV	– New Business Venture
NQF	– National Qualifications Framework
NYS	– National Youth Service
OKB	- Organisational Knowledge-Based
PGDP	– Provincial Growth and Development Plan
SADC	– Sothern African Development Community
SECI	– Socialisation, Externalisation, Combination and Internalisation model
SETA	– Skills Education and Training Authority
SSC	– Small Specialist Contractors
StatsSA	– Statistics South Africa
UNESCO	– United Nations Educational, Scientific and Cultural Organization

Chapter One

The Problem of Knowledge Transfer in a developing Context

1.1   Introduction

In the broadest sense one can say that this study has been prompted by the need to determine the extent to which the public sector has advanced in the sphere of *organisational learning*. The topic, and practices, of organisational learning (and learning organisation) seems to have taken root in the private sector. But, given the myriad and fundamental changes that have dramatically transformed the global political, social and economic landscape with the advent of the knowledge economy and all its manifestations, to what extent has the public sector been able to implement organisational learning?

The issue is not one of curiosity. As the world is grinding its way to what is known as the 'knowledge economy', questions about how organisations should employ strategies and systems of organisational learning are essential. It is common cause today that the world is caught up in phase of rapid change, and organisations have to adapt or lose the reason for their existence. An important part of that adaptation comes in the form of learning.

Governmental organisations too have to operate in a changing world. They too have to learn to cope with and in new conditions. We know that governmental organisations are slow to adapt. How, and how fast they adapt in the changing world of today, will determine if underdeveloped communities have a chance to escape poverty or not. Seen from this perspective the question about public sector organisational learning is not merely a theoretical question. How that question is answered has a direct impact on development.

This thesis was conceived of and written in the Eastern Cape Province of South Africa. As is explained in greater detail later in this chapter, the Eastern Cape is a province which faces enormous developmental problems. One could say that the Eastern Cape is a text book case of developmental problems, not only in South Africa, but globally.

The author of the thesis grew up and works in the Eastern Cape. It is this setting which has given a specific thrust to the research and the thesis. In a context such as the Eastern Cape one cannot study organisational learning in abstraction. Organisations learn within specific contexts and in interaction with those contexts. In the Eastern Cape that context is one of poverty and underdevelopment. The present South African government makes the development agenda its primary task. Hence public sector organisations are primarily focused on promoting development. And so, broadly, this thesis is an attempt to deal with the question of public sector organisational learning in a setting where such an organisation finds itself situated in the midst of developmental needs.

1.2   Thesis focus and delimitation

Organisational learning is a broad concept and involves many aspects. In the background are the complex notions of learning and organising that are complicated topics in their own right. Add to this the objective to support social development through organisational learning, and it is evident that decisive delimitation is required to bring a clear focus to the thesis.

This thesis is delimited in the following way:

a)   The focus of the thesis is narrowed down to the phenomenon of *knowledge transfer*

b)   The thesis, therefore, does not attempt to explore the notions of 'organisational learning' and 'organising' in depth. A review of literature on organisational learning – in chapter two - is done with a view to filter from the general discussions, perspectives that may be relevant to knowledge transfer in a developmental context

c)   The thesis does not enter into the global or local discourse on 'development'. For the purpose of this thesis it is sufficient to accept the current understanding of the notion of development as promoted by the present government with the twin focus on poverty reduction and skills development. This is elaborated on in the last section of this chapter

d)   To anchor the investigation into knowledge transfer in a developmental context the thesis presents a case study of a recent project in the Eastern Cape (with a decidedly developmental thrust). The project was executed between February 2008 and

December 2012. It involved 6 Cuban professionals who delivered infrastructural engineering services at various venues in the province. Details about the case and its background are given in Chapter 3. Here it must be noted that the purpose of the project was said to "bridge the scarce-skills gap, enhance infrastructure development, and create a cadre of well-qualified artisans. This would, in turn, improve our economic output and boost job creation in the country"[1]

1.3   Research questions and thesis layout

Against the background outlined above, the following specific questions are attempted in this thesis:

   a) To what extent did knowledge transfer take place as a consequence of the interventions in the Eastern Cape as described in the case at hand?

   b) What barriers to knowledge transfer occurred?

   c) What possible alternatives to the use of foreign contractual knowledge transfer exists in the Eastern Cape

   d) What implications do the experiences with the 6 Cubans hold for future attempts at knowledge transfer?

To answer these questions the research process was designed as follows and resulted in the chapters as listed:

Step one: a review of relevant literature in the field of Learning Organisation, Knowledge Transfer and related theories. The aim was to distil from relevant literature an analytical framework with which to approach the empirical investigation of the case. These are discussed in *Chapter 2*.

Step two: conduct an empirical investigation inside the Department of Roads and Public Works with the officials who were involved with the Cuban project. As described in chapter 3 the empirical investigation took the form of a survey as well as targeted interviews. The case is presented in *Chapter 3*.

Step three: identify and describe activities in the normal flow of the governance of the Eastern Cape which may be viewed as activities with knowledge transfer qualities or potential. *Chapter 4* reports on this aspect.

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[1] Worx News June/July 2007 www.publicworks.gov.za Newsletter

Step four: interpret the various findings and synthesise them to the point where conclusions may be drawn for future actions. *Chapter 5* covers these aspects.

1.4   Philosophy, biases and limitations of the study

There are a number of important aspects that defined the direction and scope of the thesis. They both shape the thesis, and/or confine its claims to validity in some respects.

a) *Firstly*, from a theory point of view, knowledge transfer has received attention in studies the world over in conjunction with considerable reflection on the topic of 'learning organisation' and cognate concepts. However, despite extensive discussions there is *no generally accepted master theory on knowledge transfer* (and the same goes for organisational learning).

b) *Secondly*, and closely tied to the previous point, the topic of this thesis is *knowledge transfer in a public sector organisational context.*

A number of implications follow from this. Factors have to be taken into account that will not play a role when corporate organisations are the setting of knowledge transfer. These factors are all political in nature and, therefore, easily restrict or ideologise attempts at knowledge transfer. Public sector organisations are not constituted or managed in the same way as private sector organisations.

Consequently, in research done in a public sector context, there is a "disconnect" with available literature and (some) theory. For practically all literature in the area of organisational learning and knowledge transfer originate in the realm of corporate and private sector organisations and related management theorising.

c) *Thirdly*, if the theory "disconnect" is taken into account together with lack of a general master theory on knowledge transfer, it places the *onus on the researcher to construct, from selective literature sources and theories, an analytical instrument* that fits the purpose of the investigation.

d) *Fourthly*, knowledge transfer is a clear concept on paper, but in the real world of human beings people find it difficult to observe their own knowledge capacities. Although the empirical part of this research was carefully designed around clear and explicit questions relating to learning, it must be acknowledged that the empirical data depend on *vague conceptions of knowledge and knowledge transfer held by respondents.*

Although this may not satisfy a purist academic theoretician, the reality is that such vague concepts characterise the developmental agenda on the ground.

e) *Fifthly*, by the time this study was initiated, the Cuban professionals had departed home. It was not possible to include them in the empirical investigations. It is, however, not clear that their perspectives would have contributed substantively to the findings of this study. The fact of their absence at least meant that the project had been terminated and could thus be investigated holistically.

f) *Sixthly*, the researcher is an employer in the Department of Roads and Public Works. He was not directly involved with either the project or the Cuban individuals. Nevertheless, the empirical investigations were done with departmental staff with whom he is acquainted. All possible care was taken to minimise inter-personal bias, but it must be accepted that some responses were coloured by such bias. There were no indications that such possible bias has adversely impacted on the validity of the research. In fact the readiness with which departmental staff cooperated in the empirical analysis indicated support for the investigation.

g) *Seventhly*, it is in principle and practise impossible to "measure" organisational learning and knowledge transfer. In the absence of any formal, standardised assessment tool *judgements of the extent and quality of learning and knowledge transfer is inevitably subjective* and to some extent anecdotal. This study can, therefore, not claim to deliver "facts" about learning. What it delivers is findings based on opinions about and experiences of learning within a very specific context. That, however, is in no way different from any other study of this kind.

h) *Eighthly,* ethical clearance for the empirical part of the research was obtained from the Department of Roads and Public Works. In the thesis the anonymity of all respondents are upheld.

1.5   Development and the Eastern Cape - the contextual setting

1.5.1   Unemployment and poverty levels in the Eastern Cape

The province of the Eastern Cape is characterised by abject poverty, acute under-development and one of the highest unemployment rates in the country. Statistics revealed by the 2011 survey of Statistics South Africa (StatsSA) put the unemployment levels in the Eastern Cape at 37.4%, with the national average at 29.8%, and only Limpopo Province

faring worse at 38.9%. The province is also the only province that was constituted by merging two former homelands or "Bantustans" amalgamated by the Cape Provincial Administration (CPA). One of its distinctive features is that it is over 70% rural in nature. Poverty in the province is mainly confined to these two former homelands, with almost a third of the households (about a million) living in dire poverty.[2] Furthermore, the seven poorest local municipalities in the entire country are located in the Eastern Cape and all of them are in the former homeland areas.[3]

The rural character of the province, coupled with the historical background of the homelands, is the province's Achilles' heel if one takes into consideration the fact that Bantustans were creations of apartheid, designed with the sole objective of isolating black people by confining them to these pseudo-independent territories in strikingly desolate areas with very meagre resources and no economic viability to speak of.

The latest statistics of 2011 released by StatsSA proved beyond any reasonable doubt that the Eastern Cape still has a huge problem pertaining to poverty levels and unemployment. The infrastructure backlog is the most glaring, when one considers the shortage of schools, roads, houses, water, electricity, sanitation and health facilities, especially in the deep rural hinterland formerly known as the Transkei. The latest statistics put the population figure of the province at 6 562 053 in 2011, with women constituting well over 50% of that population. The population growth is largely affected by the migration of potential job-seekers to Gauteng in particular and the Western Cape. In 2011, Gauteng gained 901 622 people and the Western Cape gained 192 401 from the poverty-stricken provinces. This should not be looked at in isolation. It has far-reaching ramifications in terms of jobs and livelihoods in these provinces.

The last two variables worth noting relate to average household income (AHI) and the literacy rate of people over the age of 15. The AHI in the Eastern Cape stood at only R64 000 per annum, against R143 000 for the Western Cape and R156 243 for Gauteng, with only Limpopo faring worse at R57 000. This also lends credence to the view that the two most affluent provinces attract all the skilled people, whilst the impoverished provinces are places where those who were economically active retire. Lastly, as far as education is concerned, Census 2011 revealed that the Eastern Cape was the province with the lowest percentage of

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[2] "PGDP Strategy Framework for Growth and Development 2004-2014"

[3] Austrian Development Agency, p25 2005

people who have completed Grade 12 (only 20 %), closely followed by Limpopo at 22.7%. This statistic on its own is an indication of the magnitude of work that needs to be done in order to deal a decisive blow to poverty and, most importantly, acquisition of skills.

1.5.2   The scarcity of requisite skills in the province

It is common knowledge that there is a general shortage of skills all over the world and South Africa has not escaped this crisis. Most countries, especially those that are in the least-developed and developing world, are experiencing a huge turnover of skilled personnel, and this state of affairs has been compounded by the fact that wealthy countries often resort to attracting skilled individuals with lucrative incentive schemes. Gumede[4] ascribes this dearth of skills and the attendant influx from the least-developed or developing countries to developed ones to the prevalent misrule within and the undemocratic nature of these countries, coupled with their indifference to local talent[5]. This scarcity of skills can be attributed to a myriad of reasons, including globalisation, local history, the country's education system (i.e. the quality of mathematics and science students produced) and many other factors, like the mortality caused by HIV and AIDS.

Both the public and the private sectors are severely affected by this. Other contributing factors to the loss of skills in this sector are adverse service conditions and poor remuneration in comparison to the private sector.

The notion of globalisation is one of the most fundamental notions that have preoccupied modern states, seeing that it has shrunk the world to such an extent that if there is a recession in America or in Western Europe, as is the case currently, its repercussions affect the entire world. The effects of globalisation on the skills front can be discerned in a statement made by the World Bank which asserts that "[g]lobalization trends have been accompanied by the increased migration of highly qualified labour from the developing world to industrialised countries where their qualifications are in high demand."[6] The dire consequence of globalisation is the migration of highly skilled professionals to any country that offers better prospects. This is a serious threat confronting developing countries and thus far it has no

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[4] Gumede 2012: 201

[5] Gumede 2012: 204

[6] The World Bank 2007: 18

straightforward answer[7]. The burden is placed on these countries to stem this relentless tide of migration by devising workable solutions.

For a country to gain a competitive advantage and thus leverage the potential of its natural resources to the benefit of its citizenry, it is essential that there should be a concerted effort to ensure that the amount of skills available grows in accordance with the demands of that country's economy. Gumede put it aptly as such: "In a fiercely competitive world the top-performing countries are able to produce cutting-edge skilled people and keep them, if not lure them from elsewhere. Investing in human capital, which includes building an educated workforce, is one of the main reasons for the success of the East Asian Tiger's economies."[8]

In South Africa presently there is a raging debate regarding the issue of loss of skills that has pitted various political parties and trade unions at variance with one another. There is a school of thought that attributes the loss of skills to factors such as government's perceived cronyism and nepotism. Both of these concepts refer to the appointment of friends and relatives to high positions without their having the requisite qualifications. Others cite the policy of affirmative action, which is underpinned by the Employment Equity Act, Act Number 1 of 1998, which stipulates employment targets for all previously disadvantaged groups such as women, black people in general, youth and people with disabilities.

The fact that these target groups have to be given preferential treatment when recruiting has been cited as the fundamental cause of the spiralling 'brain drain' that is afflicting the country. John Kane-Berman, for instance, whilst bemoaning the role played by the previous regime that stifled black children's ability to acquire skills that would ensure that they are able to acquit themselves in the work environment, also puts the blame squarely on the policies of the incumbent government that seek to replace white faces with black faces arbitrarily. He avers that

"Of course, South Africa's deficit of appropriate skills is to a large extent to be blamed on the fact that previous governments for a long time deliberately stunted black education in the hope that doing so would help perpetuate white supremacy. This argues for a policy that treasures the scarce skills we have among all races. Yet in cavalier fashion, we have got rid of some of the white skills in the public sector, including teaching skills, without being able to replace them with sufficient black

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[7] The World Bank 2007: 131

[8] Gumede 2012: 203

skills. And we are squandering some of the skills we do possess in the enforcement of labour, racial, and other policies."[9]

On the other hand, the incumbent government and some organisations, including the predominantly black trade union federation, the Congress of South African Trade Unions (Cosatu), and the Black Management Forum, which is a group constituted by black managers, defend these policies and are still advocating for the advancement of previously disadvantaged individuals at the expense of their white compatriots, irrespective of whether they possess the required expertise or not. They are adamant that these policies are still necessary in order to undo decades of marginalisation of these groups.

For a developing country such as South Africa which still lags far behind with regards to the delivery of essential services to the destitute, it is critical to devise and fast-track learning trajectories that are, in the main, driven by highly skilled people both from inside and outside its boundaries. Unfortunately, it would seem that South Africa is a long way off in achieving this ideal. The concept of providing incentives to attract skilled people from abroad or lure back all those skilled South Africans still in the diaspora does not seem to resonate with government, considering the non-existence or pittance of incentives that are meant to attract them to the country[10]. In particular, the notion of skills transfer, which involves utilising experts from countries with an abundance of these skills, requires close scrutiny. This, in a nutshell, is the essence of this research.

1.5.3   Attempts to grapple with the shortage of skills

The National Department of Science and Technology has acknowledged this gaping deficit of skills and have made attempts to grapple with it. In their ten-year plan for 2008 to 2018, this is how they perceive the situation and how they view the role of international partnerships: "To make progress on the grand challenges, South Africa needs to strengthen its international partnerships – both to enhance its knowledge and create an environment that is conducive for the transfer of technology. Knowledge-based economies are connected through a growing international research and cooperation network."[11]

The Industrial Policy Action Plan that was promulgated by the Ministry of Trade and Industry put this plight into focus, arguing that-

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[9] John Kane-Berman Business Day 2005

[10] Gumede 2012: 2

11 Innovation towards a Knowledge-based economy - Ten-Year Plan for South Africa (2008 – 2018) Department of Science and Technology

"A key structural constraint to sustainable industrialisation in South Africa has been the absence of demand-driven, sector-specific skills strategies and programmes, and a poor interpretation and measurement of medium-to-long term skills demand. The problem has persisted under the National Skills Development Strategy for 2005-2011. The decentralised skills delivery system embodied in the Skills Education and Training Authorities (SETAs) and the education and skills development pipeline has not provided a sufficient base to support growth opportunities in the manufacturing sector and new and emerging sectors. There has been an over-supply of lower-skill qualifications (NQF levels 1-3) and an under-supply of intermediate and high skill qualifications or 'deep' capabilities (NQF levels 4 and higher). This is combined with slow progress in effective co-ordination and articulation, across the entire education and skills development pipeline. There has been slow progress with regard to skills development curricula, building lecturer capacity, and the acquisition of equipment, machinery and training facilities."[12]

The Department of Public Service and Administration went a step further, by not only acknowledging the challenge, but also identifying its root causes and thus attempting to suggest workable solutions. They aver that

"The Public Service is in a process of transition both in terms of services to be delivered, target groups and areas and of demographics of its personnel. Although the political, economic and social necessity of this transition is undisputed, one of the negative effects that are felt is a high turnover of staff, especially within the areas of management and highly skilled professionals like doctors, nurses, engineers, financial professionals, IT personnel and senior/middle management staff. The combination of a negative perception of working conditions in the Public Service, a high demand for qualified professional staff in the private sector and growing international opportunities for skilled South Africans has seriously influenced the ability of the Public Service to attract and retain skilled and competent staff."[13]

What then are the mechanisms that have been devised and put in place to remedy this state of affairs and bring about the skills that are in very short supply, especially in the Eastern Cape?

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[12] Industrial Policy Action Plan 2012/13 – 2014/15: 42

[13] Department of Public Service and Administration: 66

Government, business and organised labour are aware of this gaping vacuum of skills. The Joint Initiative on Priority Skills Acquisition (JIPSA), which was a joint concerted effort by the three aforementioned sectors, was designed to catapult this crisis into the public domain, so that initiatives could be generated to circumvent this crisis. In one of their initial meetings they proposed targets which the country needs to strive to attain. For instance, it was suggested that universities should attempt to increase the number of engineering graduates by 1000 per annum, whilst universities of technology were expected to increase the number of engineering graduate technologists by 300 per annum. The target number of artisans to be produced by 2009 was 50 000.[14]

Furthermore, to add impetus to the initiative to accelerate the acquisition of skills, the JIPSA team proposed the idea of implanting mathematics, science and Information and Communication Technology (ICT) into high schools, so that by the time learners reach tertiary levels they will be well-equipped to acquire these highly advanced but scarce skills. The JIPSA team also worked closely with the Department of Home Affairs and other relevant stakeholders like the Department of Labour, which is instrumental in the training of artisans, to be able to import scarce skills from abroad and remove stumbling blocks that relate to the attainment of visas. This was meant to encourage the culture of transnational skills transfer.[15]

The erstwhile Premier of the Eastern Cape, Mbulelo Sogoni, in his preface to the assessment report of the Provincial Growth and Development Plan (PGDP) of the province in March 2009, put the skills shortage in its proper perspective. He argued that "[a]lthough the province has grown at a rate higher than the national economy since 2004, this economic growth has not translated into sufficient new jobs for the mass of semi- and unskilled people, nor has it had a significant impact on the number of people living in poverty (estimated at roughly 4.3 million)."[16]

There is an obvious correlation between the availability of requisite skills and the lowering of the unemployment rate and thus a reduction in the high levels of poverty. Skills translate into easier access to job opportunities, which, in turn, contribute to reduction of poverty. This happens in two ways. Firstly, those with jobs provide a living for their families and thus reduce the number of those malnourished and, secondly, their skills contribute to the

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[14] Labour Union Article on JIPSA November 2007

[15] Samuel B. A. Isaacs November 2007

[16] Eastern Cape Provincial Growth Development Plan, 2009: ii

government's service delivery efforts to alleviate the plight of the poverty-stricken that keeps them in quandary of poverty.

What are the most critical skills that are required and what are the percentages of this shortage? The most glaring shortages of skills are in the professional ranks, especially in the engineering sector. There has been a notable decline in this sector, particularly among the previously disadvantaged groups, whilst the demand for engineers is growing exponentially.[17] The migration that has caused major problems for the province of the Eastern Cape, which sees people from the province migrating to all parts of the country (with the Western Cape and Gauteng being the major beneficiaries of this trend), cannot be overemphasised when analysing the exodus of requisite skills.

Figure 1.1 Map of Migration Trends Daily Dispatch 16 July 2010

Between 2006 and 2011, close to 327 200 people from the Eastern Cape have migrated to other provinces, seeking greener pastures[18]. This could be ascribed to various factors, such as the high levels of unemployment and poverty and by implication low levels of service delivery, but it could also be attributed to better prospects in the receiving provinces with regards to business opportunities and other factors. What is abundantly clear in this state of affairs, however, is the fact that those migrating deprive the province of the vital knowledge that could otherwise be utilised in the advancements of the province. In order for the

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[17] Woolard, Kneebone & Lee, 2003: 472

[18] Daily Dispatch 2010

province to be effective there is a need to arrest this situation by not only focusing on the quality of the services it renders but also by devising effective measures to ensure that it retains and grows the critical skills that are at its disposal.[19]

1.5.4   The role of the Department of Roads and Public Works

At the core of this case study is the Department of Roads and Public Works in the Eastern Cape Province of South Africa, which sought to ameliorate the challenge of skills scarcity by taking advantage of the bilateral relations between the governments of Cuba and South Africa and importing technical experts from Cuba to come and bridge the glaring gap South Africa was experiencing.

This move was precipitated by the Department of Roads and Public Works' quest to fulfil their mandate of constructing roads, schools, clinics and hospitals for their client departments. The construction and maintenance of infrastructure is the Department's core competence. The province has always been overwhelmed by huge backlogs in terms of these much needed amenities, which are still prevalent even now, almost 20 years after the ushering-in of democracy, especially in the former homelands. One big project the Department has been mandated to undertake and is currently trying to complete is the conversion of a vast number of mud schools, primarily in the Transkei area, into brick and mortar schools, with the predetermined deadline looming large on the horizon. The construction of other amenities like hospitals and clinics and the construction of roads, lately, are the infrastructural projects that are supposed to complement these schools and are considered to be of more significance.

After the elections of 2004, the Department of Roads and Public Works was separated, with the Roads Component being transferred to join the Department of Transport. The remaining Department of Public Works' mandate shifted away from road construction to focus on the construction of schools, hospitals, clinics and offices for the other Departments, and also focused on the management and maintenance of all government-owned buildings. After the 2009 elections there was another paradigm shift, with the roads function being transferred from the Department of Transport back to the Department of Public Works. The primary purpose that has been cited for this reconfiguration (which was offered by the Provincial Premier on national television) is that it ensures that all the professionals, namely, the engineers, architects, quantity surveyors etc., are located in one Department so as to enable

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[19] Hoffman and Groenewaldt 2009: 17

the Provincial government to tap into this pool of expertise whenever it is required in the built environment.

This Department was given a mandate by cabinet to be the implementing agency of choice. This implies that all the other Departments are obliged to utilise their services to meet any of their construction needs. Hitherto, whenever these other Departments were not content with the quality of the Department of Roads and Public Works (or any aspect of their work) they would terminate their contracts and seek alternative agencies to undertake these projects on the Department's behalf. This is no longer the case, since cabinet resolved to promulgate a policy that compelled all Departments to use the Department of Roads and Public Works in all infrastructure related projects.

The Department of Roads and Public Works' mandate is to provide structural infrastructure such as hospitals and clinics for the Department of Health and schools for the Department of Education. Considering the fact that there is a huge backlog of these in the entire country in general and in the Eastern Cape in particular, the significance of this mandate cannot be over-emphasised. Although it is the mandate of these two respective Departments, Health and Education, to provide budgets to ameliorate this state of affairs, it is the Department of Roads and Public Works that has been given the burden of responsibility for all the infrastructure of the province. In addition to the mandate of constructing schools, hospitals and clinics, the department is also responsible for providing accommodation, in the form of office space, for other client departments and state agencies within the province, whilst also being responsible for providing facilities management and accommodation for Members of the Parliamentary Legislature (MPLs).

The responsibility of maintaining all these buildings also rests with the same Department. Most importantly, all the roads infrastructure network of the province is also under the custodianship of the Department. That is inclusive of all tarred and gravel roads and all the provincial bridges. This mandate entails providing roads infrastructure through design, construction, maintenance and rehabilitation. The Road Infrastructures Branch of the department is therefore responsible for maintaining a network of over 40 000km of roads infrastructure.

The last of the three core functions that constitute the mandate of this department is located in the flagship programme of government, namely the Expanded Public Works Programme (EPWP). The EPWP is meant to be the "social" wing of the Department, wherein the

Department manages a number of long-term projects that have social benefits for its beneficiaries. The Construction Industry Development Programme (CIDP), of which more will be said in what follows, and the Community Development Programme, whose primary responsibility is to devise ways of providing jobs for households in poverty-stricken areas of the province through short and long term roads-rehabilitation projects, whilst encouraging communities to set up savings clubs as part of their exit strategy, are both also located at EPWP. There is also the Innovation and Empowerment Component of EPWP, which is primarily responsible for the training of all those involved in these initiatives, with the view to empowering them with life and social skills. The last component operating under the auspices of the EPWP is called the Coordination and Compliance Monitoring (CCM), whose primary obligation is to coordinate all the job creation initiatives by all public bodies in the province, whilst also providing incentive grants to all those that stimulate job creation through labour-intensive methods.

1.6   Conclusion and thesis layout

This peculiar situation of the Eastern Cape is a microcosm of the country in general, given the propensity of the previous government to neglect the vast areas occupied by the erstwhile homelands. However, as Jackson[20] points out, although this might seem to be a precarious situation for the province, it also provides a huge opportunity to exploit the diverse nature of its workforce to its advantage and improve the quality of skills through cross-cultural pollination.

It is against this backdrop that the research presented in this thesis must be seen.

In Chapter 2 a wide ranging review of literature on the core concepts of this thesis is conducted.

Chapter 3 is devoted to the presentation of a case study involving 6 Cuban professionals.

Chapter 4 reviews alternative possibilities for knowledge transfer.

Chapter 5 synthesises the findings and make recommendations.

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[20] Jackson 2011: 78

Chapter Two

Organisational Learning and Knowledge Transfer – Core Concepts

2.1   Introduction

This chapter focuses on the definition of concepts. The discussion revolves around the use of the concepts that have been adopted for the purposes of this study. The concepts that will receive particular attention are the following: 'learning', 'organisational learning', 'knowledge' and 'knowledge transfer' and 'barriers to knowledge transfer'.

From the reviewed literature pointers are derived for a framework with which the empirical investigation – presented in chapter three – was approached.

2.2   Learning

2.2.1   Definition of learning

Learning is one of the phenomena we tend to take for granted. We assume that we know what it is and what it entails. More often than not, what we are actually referring to when we talk about learning is the rote learning or classroom learning that requires a teacher and a learner to exchange information. In most instances, the teacher imparts the information and assumes that the learner has grasped it, and therefore learning has indeed taken place, when in fact no information has been received by the intended recipient, the learner. What then is learning?

Most scholars have expressed the view that there is no definitive definition of the notion of learning. However, a myriad of definitions have been advanced and various theories of

learning have been proposed. Learning has been defined as a process that ensures that an individual is capable of increasing his/her options of exhibiting a change in behaviour that benefits that individual.[21]

An inference that could be made from the above exposition is that for one to have learnt there ought to be a certain change in one's behaviour. Again, Maier et al.[22] reiterate the notion of 'change in behaviour' after the learning process has taken place. They also posit that an observer has to acknowledge that some form of change has taken place, such as, for instance, an acquisition of vocabulary that the individual did not possess before or a visible skill that they were not capable of performing in the past, such as driving a car or being able to take part in a new sport. Maier et al. assert that "[l]earning in general can be defined as a process by which relatively permanent changes occur in behavioural potential as a result of experience."[23]

This definition combines permanent changes in the behaviour of the person who has gone through learning with experience. Experience that has been accumulated through the learning process manifests itself through the individual's behaviour. After going through the process the individual ought to do things differently from the way he/she was doing them prior to learning. If there is no change, it implies that the individual has not absorbed anything and in essence the process has been a futile exercise.

Gibson et al.[24] have also reinforced the view that for learning to have taken place there should be some form of change in the individual's behaviour. They argue that "[l]earning is the process by which a relatively enduring change in behaviour occurs as a result of practice."[25] Wills, on the other He points out that sometimes learning is stored and resorted to at a later stage.[26]

On the other hand, Childs and Heavens[27] define learning in terms of the process and its

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[21] Mike Wills 2006: 1; see also Robbins 1998 and Chowdbury 2006

[22] Maier et al 2001: 4

[23] Maier et al 2001: 4

[24] Gibson et al 2003: 154

[25] Gibson et al 2003: 154

[26] Wills 2006: 2

[27] Child & Heavens 2001: 309

outcome. They maintain that "[l]earning refers to both the process of acquiring new knowledge and the outcome. The outcome of learning is the acquisition of a new competence: an ability to apply new knowledge to enhance the performance of an existing activity or task or to prepare for new circumstances and thus change in the future."[28] The process is equally as important as the outcome, in that the process refers to the mechanism of acquiring the knowledge, be it through observation or being mentored or taught by an expert, whilst the outcome is the actual skill or competence that one has acquired that enables one to make a difference either in one's life, in one's environment or among those one is interfacing with. The outcome should therefore exhibit the change in one's behaviour through what one has learned.

The World Bank expresses a similar view, whilst also advancing the notion of a lifelong learning system that needs to be the cornerstone of any country in the knowledge economy, at all levels of development. They advocate a system that is based on the learning needs of individuals in order to develop a learner's ability to learn, create, adapt and apply knowledge.[29] It is imperative to highlight the linkages between learning and knowledge upfront. The two concepts cannot and should not be divorced from each other; they are not mutually exclusive. Serrat stresses the point as follows: "Learning is both a source and a product of knowledge; a learning organisation recognises that the two are inextricably linked."[30]

The notion of creating something through learning is also encapsulated in Senge's explication of the essence of learning when he expounds that "[r]eal learning gets to the heart of what it means to be human. Through learning we re-create ourselves. Through learning we become able to do something we never were able to do. Through learning we extend our capacity to create, to be part of the generative process of life. There is within each of us a deeper hunger for this type of learning."[31]

Linayage[32] provides us with the most comprehensive definition of learning. She avers that "[l]earning is an interactive process of action and reflection. It also involves acquiring skills,

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[28] Child and Heavens 2001: 309

[29] World Bank 2007: 127

[30] Serrat 2010: 7

[31] Senge 1990: 14

[32] Linayage 2002: 528

developing technological expertise, knowing the hows and whys of the process, and understanding the information and knowledge needed to develop a firm's competencies." The interactive aspect is more informative in that it indicates that one has to be part of a learning process that involves either other individuals or groups or even technologies in order to acquire the learning that he/she desires. This is a practical definition that accentuates the utility factor of learning within the context of knowing an organisation's processes, and thus enhances its competencies. She further avers that learning should also be conceived as an organisation's 'absorptive capacity'. In other words, learning displays the extent to which an organisation is capable of absorbing knowledge and utilising it to its competitive advantage.

2.2.2   Dimensions of learning

Filstad views learning as a participatory process that requires active involvement in the practices it is a product of. She proposes the informal modes of learning as the best learning practices to be assimilated into the fabric of the organisation. She sums up her views by pointing out that "[w]hen focusing on learning as participation the unit of analysis is social interactions between members in social practices. Mostly these learning processes are characterised as informal learning. Informal learning highlights the importance of everyday practice at work and that informal learning mostly occurs through relations with colleagues as the superior form of learning."[33] What is cogent about this explanation is the emphasis on social interactions which foster informal learning. It is abundantly clear that learning can occur even in informal settings. There is no prerequisite to have formal, pre-arranged environments for learning to flourish.

Molina-Morales and Martinez-Fernandez express a similar view pertaining to this issue. They argue that the learning process involves establishing learning networks that enable organisations to discover new opportunities and enhance their stock of knowledge.[34] How does the actual learning take place in a working environment? Linayage describes the process as follows: "[A]n apprentice working with a craftsman learns by observing (with or without interaction) and imitative behaviour through trial and error. Learning can therefore be seen as the progressive unlocking of the tacit knowledge and the internalisation of such knowledge."[35] The *modus operandi* of learning is critical in ensuring that the end product is

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[33] Filstad 2007: 3

[34] Molina-Morales & Martinez-Fernandez 2004: 82

[35] Linayage 2002: 528

indeed the desired one.

Smith[36] perceives the notion of learning as a three-dimensional concept comprising learning as a product, which occasions acquisition of a set of knowledge; as a process, which involves how the participants in that learning process attempt to meet needs and also achieve a goal; and as a function, which entails how learners are motivated and also entails what brings about the change that is exhibited by the learners.

Maier et al.[37] have identified three basic concepts of learning. These concepts are the concept of 'learning', which focuses on the processes that occur during the acquisition of new behaviour. The second aspect is the concept of 'memory', which focuses on the storage and recall of information. This is the information-processing aspect of learning. The last aspect is called the concept of 'knowledge', which basically deals with the actual content of the information. Linayage[38] identified several dimensions of learning in most organisations which she claims should be perceived within their institutional and cultural contexts. These dimensions were observed in a survey of 140 companies, and were characterised as follows:

a) learning in response to compulsory skills and knowledge gains at no cost to the organisation [Learning by Experience and Engagement]

b) learning as a result of a particular strategy, for example, a knowledge or innovation strategy, which comes at a cost to an organisation [Directed Learning]

c) learning as a result of dynamic capability at a cost to an organisation [High level Cognitive Learning], and

d) learning as a result of task sharing and team building at no cost to an organisation [Interactive Learning].

These learning dimensions can also be complemented by looking at the processes and methods that are involved in the learning trajectory. These are characterised as:

a) direct learning – for instance learning by doing, learning by using and learning by operation, changing, training, hiring and searching

b) learning by interaction – which involves learning by trying, learning by interacting and

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[36] Smith 1982: 14

[37] Maier et al 2001: 7

[38] Linayage 2002: 528

learning by selling, and

c) lastly, learning by transfer – which entails learning from inter-industry spill-overs, learning by imitation and learning by failing.[39]

For the purposes of this study the definition that will be adopted is the one that sees learning as a process that leads to a change in behaviour.[40] To summarise the essence of learning using Wakwabubi[41]'s terms, learning requires a holistic approach to be adopted which recognises that staff members need to be given an incentive to learn, organisations need to make space available for on-going learning, dominant power dynamics need to be acknowledged and dealt with expeditiously, policies need to respond to cultural realities on the ground and, most importantly, information flows need to be actively supported.[42] Chowdbury makes the fundamental point that "[l]earning is a personal act. We each place our own personal stamp on how we learn, what we learn and when we learn."[43] The need to learn has to be intrinsically motivated and the external environment will add impetus to what an individual strives to achieve.

2.3   Organisational learning

2.3.1   The nature of organisations

A comprehensive insight into the nature of organisations and the myriad of theories and models that pervade the relevant literature is pivotal in forming an understanding of the notion of organisational learning. The study of these theories and models provides us with a cogent explanation of how organisations function and how they create and are in turn affected by the circumstances within which they operate.[44]

There are two distinct types of diagnostic models of organisations, namely the descriptive models and normative models. The descriptive models are concerned with the nature of organisations (or, 'what is') and their potential (or, 'what could be').[45] Looking at the two components of diagnostic models, it is noteworthy that all the various prototypes that

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[39] Linayage 2002: 530

[40] See also Maier et al 2001 & Gibson et al 2003

[41] Wakwabubi 2011: 120

[42] Wakwabubi 2011: 120

[43] Chowdbury 2006,

[44] Jones 2007: 18

[45] Noolan 2004: 1

constitute these two types are similar and "[e]ach is predicated on a particular theory/theories or perspective(s), and each intend[s] to highlight and bring into focus a broad range of data and experience for purposes of diagnosis and intervention."[46]

These models range from Beckard's GRPI model to Kotter's Organisational Dynamics model, to McKinney's 7Ss model to Weisbond's Six-Bond Diagnostic model (to mention just four out of 16 known organisational models).[47] Below is McKinney's 7Ss Model, which shows what a typical organisation resembles:
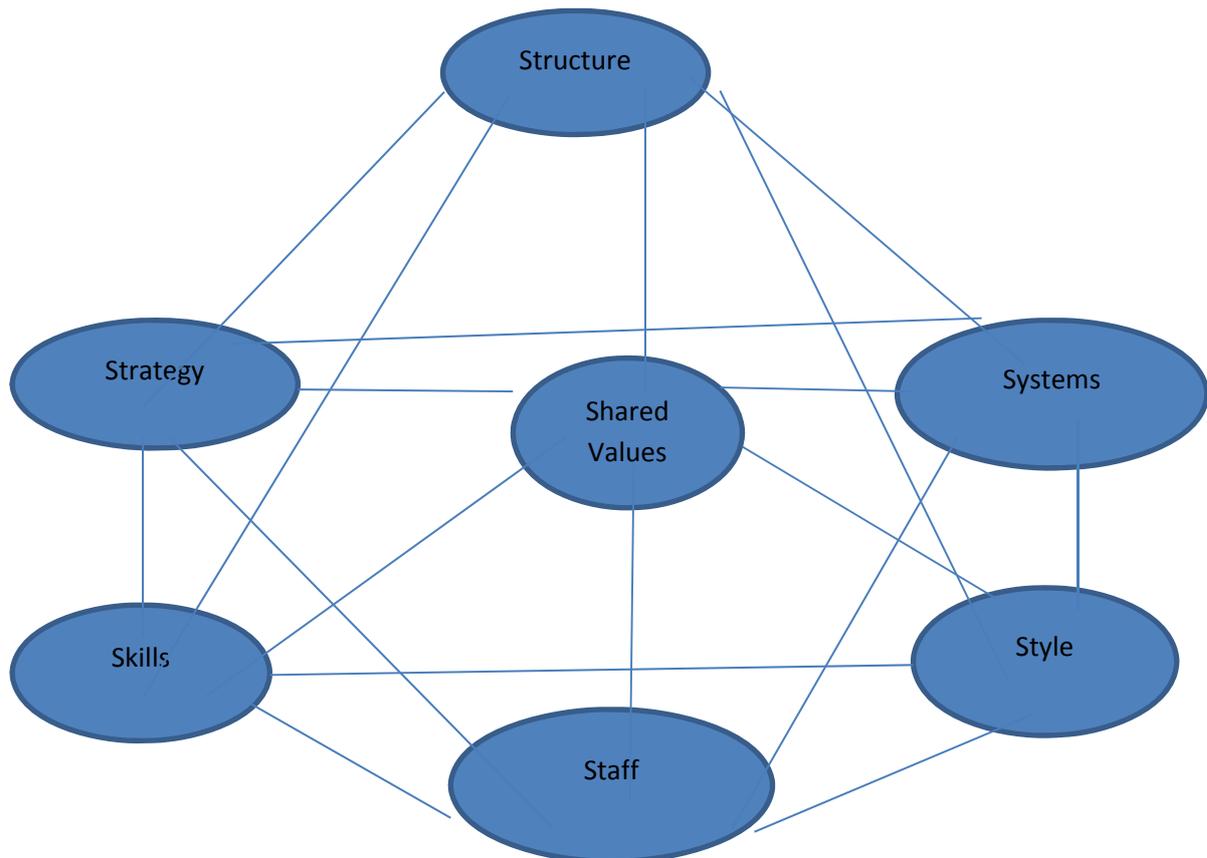
Figure 2.1 McKinney's 7Ss Model:

Hoffman and Groenewaldt describe a quintessential organisation as the systematic planning of the relationship of jobs to one another in a decision system to create a living social organism empowered to react to relevant environmental stimuli, commonly referred to as "operational circumstances".[48] They perceive organisations as living social organisms

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[46] Marshak 2004: 3

[47] Marshak 2004: 5

[48] Hoffman & Groenewaldt 2009: 3

because of the most fundamental components that constitute it, namely human beings.[49] To demonstrate this point further, the McKinney's 7Ss Model as illustrated above is testimony to the centrality of people in the organisation.

The first of the 7Ss, namely the "structure", is a graphical manifestation or representation of people within an organisation. The second is the "systems", which represent the physical or automata that provide support to the work environment of the employees. "style" symbolises the character of the organisation or the modalities of conducting its functions; "staff" refers to the actual employees who are responsible for the activities of the organisation; "skills" refers to the knowledge or capabilities of the employees that enable them to execute their functions competently; "strategy" is the 'how' part of rendering its services or the model used to perform the functions and, lastly, the "shared values" represent the glue that holds all these components together in a symbiotic relationship. The above explication is designed to expand on the essential worth of people in an organisation.

To illustrate the risks of imposing a theoretical organisational structure or model on operations, the following are the two extremes of a range of organisational types.

1. The Administrative ('mechanistic') Organisation (centralised decision-making and control):

   a) performance-focused organisations;

   b) simple and stable 'production' operating environment;

   c) large-sized operational units;

   d) centralised decision-making powers;

   e) limited individual authority;

   f) mature organisation with settled standards of performance;

   g) inflexible organisation structure;

   h) functional divisions as the basis for the grouping of work;

   i) large volumes of repetitive (routine) work suited to standardisation;

   j) standardisation of work processes is the basis of coordination and control;

   k) proliferation of formalised rules, regulations, processes and communications;

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[49] Hoffman & Groenewaldt 2009: 12

l) elaborate administrative structures with sharp distinctions between line and staff functions;

m) supporting technical infrastructure systems used to regulate routine work practices and formalisation;

n) management focus is mainly fine-tuning of operations and more efficient ways to produce required outputs.

2. Professional (dynamic) Organisation - (decentralised decision-making and control)

a) problem solving organisation;

b) complex / dynamic operating environment;

c) required outputs cannot be predicted, made repetitive, and so standardised;

d) standards of professional performance originate outside operating organisations in self-governing professional associations;

e) professionals are registered with professional associations along with their colleagues across all operating organisations;

f) professional organisations rely on the standardisation of skills (scope of practice) for coordination and control;

g) coordination and control also occurs between the operating professionals through the standardisation of skills and knowledge, i.e. by what they know to expect from their colleagues;

h) core operations are staffed with registered professionals who are in control of their outputs, i.e. the freedom to act within their registered scope of practice;

i) professionals work independently of their colleagues, but closely with the clients they serve;

j) professional organisations emphasize authority of a professional nature - the power of expertise (or sapiential authority);

k) strategies of professional organisations are largely those of the individual professionals within the organisation as well as those of the professional associations on the outside;

l) professional organisation strategies represent the cumulative effect over time of the

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projects or strategic 'initiatives' that its members are able to undertake;

m) supporting technical infrastructure systems cannot be used to regulate work practices or facilitate automation of work;

n) professional organisations are driven by professional rules, standards and client needs;

o) change in the professional organisation is not caused by new administrators taking office and introducing reforms.

Organisations are, by their very nature, in a state of flux and hence change is always inevitable and its occurrence is mostly desirable. Luhman's theory of organisations as organised social systems finds resonance here.[50] Luhman views organisations as systems that bundle people into different positions and responsibilities in a hierarchical structure with the purpose of pursuing a collective set of goals and objectives utilising redundant procedures and repeatable practices, and he therefore espouses the view that these systems should be construed as 'decision machines'.[51]

This is not a far-fetched statement if one looks at the current state of the public service, in particular. Jones Cong and Pandya have captured this phenomenon aptly in their exposition of public service organisations. They maintain that "[t]he structure of the public sector organisations has traditionally been compartmentalised. 'Silo" is probably the best word to describe it. 'Need to know' basis is part of the public sector culture, 'Knowing is power', 'what's in it for me', and 'not invented here' syndrome are typical mind-sets of the manager and staff in organisations. In such an environment, information and knowledge are hardly ever shared across different units and different organisational levels."[52] However, the utility purpose of organisations is best encapsulated by Mostert and Snyman as follows:

"Organisations exist because of the needs of their stakeholders. Only if they fulfil these needs, can organisations survive and prosper. Organisations do what they do to fulfil the needs of their stakeholders by responding to and interacting with the external environments in which they exist. Therefore, just as individuals, organisations need to have knowledge of the needs of their stakeholders, knowledge of their environments and the ability to apply this knowledge effectively in order to

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[50] Nassehi, 2005: 178

[51] Nassehi 2005: 185

[52] Cong & Pandya 2003: 30

survive and prosper."[53]

Organisations world-wide have come to realise that the acquisition and retention of knowledge are indispensable in the current age if an organisation aspires to be a formidable force in current competitive and turbulent environment which is always in a state of flux.[54] The knowledge economy demands that a learning organisation strive to retain its institutional memory against all odds. Furthermore, Harrim contends that learning organisations are set apart from their competitors by their ability to create their own future by continually expanding their capacities and being able to transform themselves.[55]

2.3.2   Organisational learning versus a learning organisation

Is there a clear distinction between the notion of 'organisational learning' and a 'learning organisation'? This needs to be elucidated upfront, in order to avoid any confusion or misconception pertaining to the use of these concepts in this study. Organisational learning, in a nutshell, is a process that an organisation undertakes with the objective of becoming a learning organisation. This might sound tautological. To explain it further, on the one hand, organisational learning is an involved or intense process that nurtures an organisation's knowledge assets and fosters processes of knowledge management in all its manifestations. On the other hand, a learning organisation is the end-product of that intense process; it is an ideal towards which most 21st century organisations aspire.

In most literature these two concepts are used interchangeably. In essence, they denote the same thing, notwithstanding the fact illustrated above that one (organisational learning) is the process, and the other one is the ideal or end-product (the learning organisation). In this study the approach that will be adopted will use them interchangeably; in contexts where references are cited, however, the general approach would be to use "organisational learning", which forms part of the title of the study.

There is one particular scholar who has inadvertently demarcated the distinction between the two concepts. O'Keefe expounds that "This paper develops and explores the characteristics of *organisational learning*, yet these characteristics on their own do not amalgamate to create

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[53] Mostert & Snyman 2007: 6

[54] Ghosh 2004

[55] Harrim 2008: 3

learning organisation"[56] (Emphasis added). Although this statement does not make the distinction explicitly, one can infer that it is implied by looking at the manner in which the two phrases have been used in that statement. This clearly shows that a semblance of organisational learning might be happening within a particular organisation, but that in itself does not guarantee that the end-product of that process would be a learning organisation.

2.3.3   Definition of organisational learning

What, then, constitutes organisational learning? There are various definitions of this phenomenon that are advanced by various scholars. According to Rick, Weber and Camerer, organisational learning entails the creation, retention and the transfer of knowledge within and from external sources.[57]

The concept of a 'learning organisation' is synonymous with the advent of organisations as recognised social entities. It has always been an acceptable fact that members of an organisation will, at one point or another, engage in some form of learning. Spencer offers the following explanation about the centrality of learning in organisations: "Workers have always learned at work; learning at work is not a new phenomenon. What workers have learned has always been diverse – for example, it ranges from learning about the job and how to do the work; to how to relate to fellow workers, supervisors and bosses (the social relations of work); to gaining understandings about the nature of work itself and how work impacts on society. Some of what workers learn is useful to their employers, some is useful to themselves, some is useful to their union organisations, and some may be useful both to their employers and themselves."[58]

The only discernible challenge to this assertion is that it would seem that learning in such an environment is not a conscious decision taken by the organisation to methodically engender a culture of learning and ensure that the learning culture is accompanied by a concomitant allocation of adequate financial resources to stimulate learning. A learning organisation is expected to foster a spirit of collaboration between all its knowledge assets and maximise the utilisation of its competences, capabilities and technologies in an environment that is not

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[56] O'Keefe 2002

[57] Rick, Weber & Camerer 2007: 18

[58] Spencer 2009

constrained by the notions of geography, distance, time and space.[59]

Most importantly, such an organisation needs to put a lot of emphasis on the empowerment of its human resources to be able to cope with the state of continuous change. Gibson states clearly that the sharing of knowledge, experience and ideas ultimately becomes a habit in a learning organisation."[60] However, it has been noted that individual members of an organisation may learn, but that learning might not translate into a learning organisation, and thus there might be no behavioural change exhibited in the organisation.[61]

What is the motivation for organisations to undertake this arduous assignment of creating a learning organisation in the first place? The answer to this question is made clear by the following statement: "It is a widely held view that the most important contributor to corporate competitiveness will be the ability of one company to learn faster than others; as a result, companies may seek to become learning organisations in order to increase new knowledge development and knowledge utilisation which will lead to competitive advantage and transformational change."[62]

We need to learn how to learn, according to Friedman.[63] By this he means that we have to learn the right things for purposes of benefiting not only ourselves but also our organisations and the broader society. UNESCO underscores this view of learning to learn thusly: "Learning to learn means learning to think, to doubt, to adapt as quickly as possible, and to be able to question one's cultural heritage while respecting consensus. Such is the basis on which knowledge societies will be built."[64] Friedman advances the view that for one to be indispensable and irreplaceable, one needs to have four distinctive features and one of those is the quality to be able to learn how to learn. Another noteworthy characteristic is that one needs to like dealing or working with people, and the last one is that we need to nurture the right brain more than we do the left brain.

These features are appropriate for a learning organisation, too. For such an organisation to

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[59] Boisot 1999: 209

[60] Gibson et al 2003: 487

[61] Starbuck and Hedberg 2001: 332

[62] Blackman 2007; See also Pedler et al 1989; Senge 1990; de Geus 1997; Altman and Iles 1998; Pemberton & Stonehouse 2000

[63] Friedman 2006: 257

[64] UNESCO World Report 2005: 60

thrive individuals need to embody these features individually in order for a group and, consequently, an organisation to be a learning organisation. There are contrasting views as to whether there is such a phenomenon as an organisation that learns. There are some experts who express the view that an organisation as an entity does not learn; rather, it is the sum total of the learning of individuals that occurs within an organisation that should be examined.[65]

One renowned proponent of a learning organisation who has written extensively on the subject is Peter Senge. His book entitled *The Fifth Disciple* is dedicated solely to this subject. Senge perceives a learning organisation as an "organisation where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together."[66] He further argues that it is only organisations that are capable of exploiting people's commitment and their capacity to learn to the fullest that will really excel in the knowledge economy. This needs to happen at all the levels of the organisation, and should not be confined to the management echelons.[67]

The essence of learning within an organisation is to harness all the knowledge at the organisation's disposal. This is meant to ensure a constant flow of knowledge that seeks to improve the efficiency and effectiveness of the operations of the organisation. The above assertion can be gleaned in the account that has been offered by Blackman[68] when she maintains that "[l]earning organisations continually strive to improve and transform themselves, not merely make incremental adjustments. They are organisations which seek to improve their effectiveness through reflection, innovation, continuous evaluation, quality improvement and timely responses to their internal and external environment."

2.3.4   Role of leadership in a learning organisation

The role of senior management in fostering the culture of learning in the organisation without being obtrusive and with minimal interference has been aptly encapsulated by Senge's analysis of such a scenario. He avers that "[i]n a learning organization, leaders are designers, stewards and teachers. They are responsible for *building organisations* where people

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[65] Sue Gilly 1997: 1

[66] Senge 1990: 3

[67] Senge 1990: 5

[68] Blackman 2006: 2

continually expand their capabilities to understand complexity, clarify vision, and improve shared mental models – that is, they are responsible for learning. Learning organisations will remain a "…good idea until people take a stand for building such organisations. Taking this stand is the first leadership act, the start of *inspiring* (literally 'to breathe life into') the vision of the learning organisation."[69]

In the same vein, the Asian Development Bank has identified key strategic areas within which the senior management of an organisation could make their interventions to enable an organisation to learn. They expound that "[t]he leadership of a learning organisation is committed to the importance of learning and clearly communicates that learning is critical to organisational success. The leadership recognises the importance of providing the motive, means, and opportunity for learning: (i) the motive being the "why?" – the purpose and reason for learning; (ii) the means being the "how and what?" – the models, methods and competencies required, and (iii) the opportunity being the "where and when?" – the spaces for learning. Leaders take an exemplary leading role in creating and sustaining a supportive learning culture."[70] Lastly, a clearly defined role for managers, supervisors and specialists in a learning organisation is succinctly delineated by the Serrat, when he declares that; "In a learning organisation, an important source of individual learning and development is coaching and mentoring support from managers, specialists, and other experienced colleagues."[71] Notwithstanding that assertion, he then goes on to caution against unrealistic expectation of assuming "that good contract managers and technical specialists automatically make good coaches and mentors."[72]

The last statement is very instructive in the context of the study of the Cuban experts as revealed hereunder. It becomes incumbent on those studying organisational learning and knowledge transfer to take cognisance of the fact that, those that have been assigned the responsibility of transferring their tacit knowledge may be experts in their respective fields, but may not necessarily be adept at transferring that knowledge to their protégés, as required.

2.3.5   Key success factors for learning organisations

Organisational learning entails the process of improving organisational action by utilising

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[69] Senge 1990: 340

[70] Asian Development Bank: 5

[71] Serrat 2010, p6

[72] Serrat 2010, p6

available knowledge and understanding to enhance the efficacy of such knowledge.[73] Rampersad amplifies this notion when he says that "[a]n organisation that does not learn continuously and is not able to continuously list, develop, share, mobilise, cultivate, put into practice, review, and spread knowledge will not be able to compete effectively. That is why the ability of an organisation to improve existing skills and acquire new ones forms its tenable competitive advantage."[74] He further argues that it is therefore essential that an organisation should take stock of the kind of knowledge it possesses, where that knowledge is located, who has it, how best to utilise it, how best to ensure that it is shared, how this knowledge adds value in the value chain of the organisation and, ultimately, how all of these can be maintained.

It has been observed that there is a direct correlation between an organisation's culture and learning. The extent to which an organisation fosters learning is largely influenced by the culture that dominates in that organisation. Raeside accentuates this view thusly: "An organisation's culture impacts on its ability to learn and respond. If an organisation is authoritarian, bureaucratic and focused on satisfying the requirements laid down by its funders, it may not have enough flexibility truly to respond to and learn from knowledge generated through participatory processes."[75] She further argues that a learning organisation is cognisant of the complexities that are at play in any development intervention and how to manage that dynamic process.

The learning organisation strives to encourage the spirit of innovation and initiative to such an extent that those who commit mistakes are not ridiculed but encouraged to pursue their objectives and the mistakes are perceived as learning areas. There is a pervasive culture of dynamism and creativity where members of the organisation are stimulated to make their contribution by doing and talking their ideas through. Decisions are not centralised at the top echelons of the organisation; they also emanate from the bottom to influence what needs to happen in the organisation. This spirit of collaboration and complementarity thus ensures that there is a cross-pollination of knowledge and ideas are generated for the benefit of the entire organisation.[76]

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[73] Linayage 2002, Gavin 2000.

[74] Rampersad 2002: 2

[75] Raeside 2011: 100

[76] Raeside 2011: 100

Raeside also acknowledges the fact that the notion of organisational learning is not an easy undertaking. It requires organisations to brace themselves for difficult and tumultuous change, and this phenomenon demands organisations to be brave enough to adopt this extraordinary change.[77] The concept of change has also been aptly articulated by Blackman. He maintains that "[t]here are many different views of what organisational learning is and how it comes about, but most writers are in agreement that, as a result of the learning, something within the organisation changes. It is this change that the learning organisation is attempting to harness in order to achieve competitive advantage."[78]

This study focuses on the transfer of knowledge as epitomised by the transfer of skills, as the fulcrum of a learning organisation. The *modus operandi* of this transfer, if it does happen at all, will indicate the extent to which this notion is pervasive in a particular organisation, or whether its occurrence is by design or by default.

The Development Bank of Southern Africa is one of the trail-blazers in Sub-Saharan Africa in the area of knowledge management. They acknowledge the role of knowledge management as pivotal: "A learning culture is the cornerstone of a knowledge organisation and the starting point for knowledge management".[79] A learning organisation exhibits peculiar traits that distinguish it from its rivals. One such trait is the inculcation of the culture of sharing knowledge, experience and ideas through various methods such as story-telling.[80]

For instance, the South African government promulgated a framework that ensures that Departments place a premium on the acquisition of scarce skills by, among other things, paying people who possess these scarce skills allowances and has even provided a clear method of how the allowance ought to be calculated[81]. The idea of awarding bursary schemes to students who show potential and, in some instances, even going to the extent of offering learnerships and internships to youth are some of the mechanisms that are designed to lure the youth to the public sector and thus ensure that there is a constant stream of skills coming through.

What do scholars perceive as the necessary ingredients for organisational learning to thrive?

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[77] Raeside 2011: 102

[78] Blackman 2006: 4

[79] Blackburn, Khoza & Tate 2003: 7

[80] Gibson et al 2003: 487

[81] Scarce Skills Framework 2004

Donnelly, Gibson Ivancevich & Konopaske 2003	Santos, Dussauge & Mitchell 2005	O'Keeffe 2002	Blackburn, Khoza & Tate
Scanning imperative	The organisation's absorptive capacity	Customer-responsive culture	Individuals are motivated to contribute to knowledge creation
Performance gap	The organisation's learning intent	Anthropomorphism in organisations	Knowledge sharing through a rewards system;
Concern for measurement	Its experience in alliances	Intellectual capital	Support and learning are provided by senior management;
Experimental mind-set	The governance structure of the alliance	Dissatisfaction with the traditional management paradigm	The individual and organisation recognise the benefits
Climate of openness	The scope of the alliance	Nature of global business	Accumulating knowledge and deploying it into products, services and processes p2
Continuous education	The type of partners in the alliance		
Operational variety	The organisation's ability to interact with its partner		
Multiple advocates	The trust between partners		
Involved leadership			
Systems perspective			

Table 2.1 Ingredients for Organisation Learning

When all the above ingredients are utilised collectively within an organisation they enable that organisation to be effective as a learning organisation.

2.3.6   The characteristic features of learning organisations

A learning organisation is characterised by features that distinguish it from non-learning organisations and that could lead to it being construed as a learning organisation, the notion of transfer of knowledge or skills is just but one aspect of such an organisation. The vast amount of literature on organisational learning that delves on the array of these various aspects bears testimony to this assertion. As has been made abundantly clear in the above

discussion, a learning organisation normally displays distinctive characteristics, these include provision of adequate space and opportunities for individuals to exercise their innovative and creative acumen and thus learn how to induce change that would benefit the organisation. The interdependence between a learner and the environment in which that learner operates is of paramount importance. Starbuck and Hedberg assert that, "For learning to occur, a learner and an environment must be tightly linked, but the environment exerts much more influence on a learner than vice versa." [82] They further argue that for learners to make the most of their environments and also be able to discover change, they need to possess peculiar characteristic traits such as curiosity, playfulness, willingness to experiment, and analytical skills.[83]

Whilst also acknowledging the above dimensions in a learning organisation Rampersad[84] highlights a myriad of ways through which the ability of a learning organisation could be increased. He postulates that the following steps are potentially capable of increasing that ability:

1. Creating conditions whereby people are willing to apply their knowledge, share and intensively exchange it with each other

2. Establishing the organisational structure in such a way that people get sufficient space and opportunities to gain experiences and think

3. Stimulating employees to formulate their own Personal Balanced Scorecard and through this cultivate a positive attitude toward improvement, learning and developing

4. Letting employees reflect on the balance between their own personal ambition and the shared ambition of the organisation

5. Making an inventory of your learning style and aligning it to your personal ambition. Reviewing this periodically; aligning it to the planning, coaching and appraisal meetings and the 360° feedback system

6. Establishing improvement teams in which a balance of personalities, skills and learning styles is present

7. Developing and accepting self-knowledge regarding their own favourite learning style

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[82] Starbuck & Hedberg 2001: 333

[83] Starbuck & Hedberg 2001: 333

[84] Rampersad 2002: 3

and the ones of other team members

8. Giving people a sense of direction based on a shared ambition and linking them to each other

9. Working with teams where learning is central; teams that think and act from a synergistic perspective, and are well coordinated, with a feeling of unity

10. Using images, metaphors and intuitions to share and exchange implicit knowledge

11. Working with self-directing teams in an organisational networking, using generalists with ample responsibilities and competences and where there are knowledge overlaps and task rotations between employees

12. Stimulating employees to think about, identify and solve common problems as a team, let go of traditional ways of thinking, constantly develop their own skills, let them acquire experience and let them feel responsible for company and team performance

13. Having leaders who coach, help, inspire, motivate and stimulate, are action oriented, and constantly evaluate processes based on performance measures

14. Having people who continually learn from their mistakes and openly communicate with each other, and constantly apply Deming's and Kolb's learning cycles in their actions

15. Systematically working with problem solving methods (brainstorming, problem solving cycle, risk management.)

16. Giving feedback about improvement actions undertaken

17. Applying an integral and systems approach

18. Implementing a knowledge infrastructure; internet, intranet, library, evaluation sessions.

19. Letting employees concentrate on everything that happens in the organisation

20. Stimulating informal employee contacts

21. Driving out fear and mistrust from the organisation

22. Simplifying the organisational structure and management language, and

23. Allowing mistakes. Without mistakes, there is no learning.[85]

The essence of what is espoused by Rampersad is that for the dream of becoming a learning organisation to be realized all knowledge management principles and practices have to be intrinsic in the culture and fabric of the organisation. The definition of knowledge management, in this study, is derived from Laudon and Laudon, who define it as a "…set of processes developed in an organisation to create, gather, store, transfer, and apply knowledge. Information technology plays an important role in knowledge management by supporting these business processes for creating, identifying, and leveraging knowledge throughout the organisation. Developing procedures and routines – business processes – to optimize the creation, flow, learning, protection, and sharing of knowledge in the firm is now a core management responsibility."[86] They are, in a nutshell, providing us with a blueprint that successful learning organisations have embraced in their quest to gain a competitive edge.

For an organisation to fulfil its responsibility of being a learning organisation it has to undertake certain peculiar steps that will catapult it into the 21st Century player in the knowledge economy. The steps are the following:

1. The development and transfer of skills through staff exchange, internship, professional associations and fellowships, mentoring or coaching programmes, as well as intensified on-the-job training;

2. The conversion of project experience and evaluation into learning mechanisms;

3. Accredited development finance qualifications;

4. Learning and development plans, including an in-house training curriculum, based on core competency learning requirements;

5. Adult learning methodologies and approaches that encourage learning by staff;

6. Leveraging the knowledge gained through external formal courses;

7. Corporate learning projects through multi-unit integrated learning initiatives;

8. Human resource development specialist knowledge contracted into operations teams

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[85] Rampersad 2002: 3

[86] Laudon & Laudon 2004: 315

and projects.[87]

In summary, the notion of the learning organization should be viewed as "any organization dedicated to generating lessons and then using these new insights to modify core operations. It creates and supports robust learning systems that align core with evolving goals." They have also highlighted five key activities that characterise a learning organization which include the following:

1. Systematic: Insisting on data over assumptions.

2. Adventurous: Willing to try different approaches.

3. Confident: Of the values of productive failure instead of unproductive success.

4. Open-minded: Borrowing enthusiastically from best practice.

5. Dynamic: Sharing knowledge and rotating and training its people.[88]

Watkins and Marsick in Cullen[89] have identified seven pivotal dimensions that characterise a learning organisation, and these are;

1. Creating opportunities for continuous learning
2. Encouraging and supporting dialogue and inquiry
3. Encouraging and supporting teamwork and collaboration
4. Establish systems for acquiring and sharing learning
5. Employees' empowerment and collective vision
6. Linking the organisation with its external environment
7. Develop leaders to be examples or models and support learning at the individual, team and organisational levels[90]

Cooper creates a picture of a learning organisation from a South African Trade Union perspective, in which there are crucial principles and practices that contribute towards the desired state of affairs in abundance. She maintains that,

> "… learning may best be promoted in organisations that value collectivism and
> social solidarity, where a thirst for knowledge is born out of the real experiences

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[87] Blackburn, Khoza & Tate 2003: 5

[88] Bennett & Jessani 2011: 39

[89] Watkins & Marsick in Cullen 1999 4

[90] Harrim 2008: 4

and needs of its members, where a multiple voices are able to meet and contest, where the educative role of ordinary grassroots members of the organisation is valued and nurtured, and where the symbolic and communicative culture of the organisation is an expression from below of the cultural history of its members."

2.3.7   Issues affecting learning organisations

The process of transforming an organisation is strewn with various pitfalls and seemingly insurmountable challenges. Ledford and Berge express this view in these terms, "Building a learning organisation is a challenging, slow, continuous multifaceted process that requires continual changes in the whole organisational internal environment, including culture, structure, job design, processes, technology, human, etc."[91]

How each organisation masters these changes depends largely on its ability to learn and thus gain a competitive advantage over its counterparts. As Boisot aptly puts it, "... if the expression the *learning organisation* has any meaning at all it requires firms to confront the turbulence rather than avoid it, to *absorb* uncertainty rather than reduce it." [92]

There are several factors that have been cited as contributing to the non-attainment of this ideal of a learning organisation. Some scholars[93] have cited factors such as lack of shared language, values, knowledge and understanding as the critical factors that are an impediment to this ideal. These factors are pivotal in the study of knowledge transfer in an organisation that purports to be a learning organisation. They determine the extent to which knowledge will be leveraged to enable it to flow to the components of the organisation where they are most needed. If there is no common language, values, knowledge or understanding there can be no transfer of knowledge and hence the organisation cannot be deemed as learning.

Cooper creates a picture of a learning organisation from a South African Trade Union perspective in which there are crucial principles and practices that contribute towards the desired state of affairs. She maintains that "learning may best be promoted in organisations that value collectivism and social solidarity, where a thirst for knowledge is born out of the real experiences and needs of its members, where a multiple voices are able to meet and contest, where the educative role of ordinary grassroots members of the organisation is valued and nurtured, and where the symbolic and communicative culture of the organisation

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[91] Ledford & Berge 2008: 5

[92] Boisot 2003: 47

[93] Easterby – Smith 1998 & Blackman: 2006

is an expression from below of the cultural history of its members."[94]

What curtails or prevents this best case scenario from ever being realised are the constraints that are inherent in some organisations that emanate from the pervasive and corrosive issue of power relations within those particular organisations. These constraints that impede the advancement towards this ideal of the learning organisation arise from "historical inequalities between workers based on language, 'race', the urban-rural divide and the hierarchical division of labour in the workplace. All these factors promote greater participation by some, and more limited participation or exclusion by others."[95]

These power relations are forces to be reckoned with in the context of South African public service, which is the subject of this study. To ignore them would be counterproductive in that the findings could be skewed in one direction as a consequence of ignoring the rich history of disenfranchisement and colonisation of the majority of the populace. Spencer reinforces the view that power relations are a complex phenomenon that has a huge bearing on how learning takes place, who is engaged in the learning process and what they learn. He avers that "[t]o ignore power relations and authority at work is to ignore realities of what it is to be an employee. Organisational culture is determined by management, and learning about that culture is learning to accept it."[96]

He goes on to say that power, authority, control, inequality and ownership are pervasive issues that impact either positively or negatively in the workplace, depending on which side of the equilibrium one finds him/herself. He advocates for the creation of learning opportunities, tangible empowerment of employees and genuine workplace democracy.[97]

Lastly, a clearly defined role for managers, supervisors and specialists in a learning organisation is succinctly delineated by Serrat when he declares that, "In a learning organisation, an important source of individual learning and development is coaching and mentoring support from managers, specialists, and other experienced colleagues."[98] Notwithstanding that assertion, he then goes on to caution against the unrealistic expectation of assuming "that good contract managers and technical specialists automatically make good

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[94] Cooper 2009: 293

[95] Cooper 2009: 293

[96] Spencer 2009: 297

[97] Spencer 2009: 306

[98] Serrat 2010: 6

coaches and mentors."[99]

The last statement is very instructive in the context of the study of the Cuban experts as revealed in what follows. It becomes incumbent on those studying organisational learning and knowledge transfer to take cognisance of the fact that those that have been assigned the responsibility of transferring their tacit knowledge may be experts in their respective fields, but may not necessarily be adept at transferring that knowledge to their protégé(e)s as required.

2.4   Knowledge

2.4.1   Definition of knowledge

It has become common knowledge that we are living in a knowledge economy. Everything we do and say is impacted upon by knowledge. There have been extensive studies since the era of Plato, Socrates and Aristotle as to the epistemology of the concept of knowledge and all the words associated with it. Knowledge has dominated our discourse for centuries, precisely because its significance is fundamental for the survival of mankind and for purposes of coming up with novel ways of doing things. Davenport and Prusak put it succinctly as follows: "Better knowledge can lead to measurable efficiencies in product development and production. We can use it to make wiser decisions about strategy, competitors, distribution channels, and product and service life cycles."[100] Because of the complex nature of the notion of knowledge, a single definition is not possible.

One definition that has made an indelible impression over the years is that of knowledge as the capacity to act[101]. This definition points to the fact that by virtue of possessing knowledge a person is expected to perform one of these three activities: they either take some action of some sort, or they communicate what they know to others, or they produce something for the benefit of others. They could also store that knowledge for posterity, to be introduced when it is required.

Knowledge has also been defined as the justified true belief[102]. It is based on belief, not emotions, gut feeling, intuition or assumptions. We believe that something is true and we are

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[99] Serrat 2010: 6

[100] Davenport & Prusak 2000: 6

[101] Stehr 1996; Davenport & Prusak 2000

[102] Nonaka & Takeuchi 1995

justified in our belief because we have evidence and therefore we know what constitutes knowledge. Ndlela has come up with an apt definition which clearly delineates the utility factor of knowledge, particularly in the context of the public sector where delivery of services is of paramount importance. She defines knowledge as information with the capacity for action and for decision-making.[103] She further expounds that knowledge is crucial not only for decision-making but also for building a strategy for the organisation. The fact that knowledge leads to action being taken has been underscored by Turban, Leidner, Mclean and Wetherbe who define knowledge as "information that is *contextualised, relevant* and *actionable*."[104]

The Development Bank of Sothern Africa (DBSA)'s account is that "[k]nowledge is an acquired human or institutional capacity derived from experience and learning. It is formed and shared by individuals or by groups assembled in formal or informal structures having a shared purpose such as clusters, units, teams or discussion groups. Knowledge is internalised learning, whether it is internalised in individuals or institutionalised in organisations. It is deployed in various forms, such as in decision-making processes, in operating processes that facilitate organisational goals, or in products that meet client needs."[105] They further argue that the ability to take action is the result of being knowledgeable.

Knowledge is a product of experience, training, education and observation, and it epitomises pertinent elements such as people's judgements, values and insights.[106] The consequences of ignorance or the absence of knowledge can be detrimental; in some instances it can even be fatal. The fact that in some countries (especially those that are in the Third World) multitudes of people perish from curable diseases because of lack of knowledge has been cited as one good example of the menace posed by lack of knowledge.[107] Davenport and Prusak have defined knowledge as follows:

> "Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the mind of the knowers.

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[103] Ndlela 2008: 36

[104] Turban et al 2006: 368

[105] DBSA 2003: 2

[106] Treasury Board of Canada 2002: 7

[107] Akinnus 2008: 42

In organisations, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices, and norms."[108]

2.4.2 Different types of knowledge

The literature distinguishes between different types of knowledge. Knight and Howes'[109] review of the literature shows five different types of knowledge. These are based on the five investigator questions: know-how, know-who, know-when, know-where, know-why and are explained as follows:

· *Know-how:* This may be explicitly stated in organisational procedures but in practice much of it will be found only in people's heads (tacit knowledge). The difficulty in defining know-how is precisely what makes it a source of competitive advantage because it is knowledge that cannot be easily written down or taken from its context and replicated elsewhere.

· *Know-who*: Assuming that significant know-how exists only in people's heads, access to the right people becomes crucial - in other words, knowing whom to ask in relation to specific problems. A 'silo' mentality in organisations, where knowledge is seen as power, reduces access to know-who.

· *Know-why*: This relates to whether people know why they are doing something and encompasses the vision and culture of an organisation. This contextual knowledge allows individuals to go about tasks in the most appropriate way.

· *Know-when:* This relates to timing, knowing when to do something and when not to.

· *Know-where:* How well do people know where to find what they need? Knowing where to find and access information is frequently the first hurdle for many people in organisations to overcome[110].

Lam and Abou-Zeid[111] have identified four types of knowledge; however, the latter focuses on types of tacit knowledge whilst the former categorises knowledge in general. Lam talks about 'embrained', 'embodied', 'encoded' and 'embedded' knowledge types that are

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[108] Davenport & Prusak 2000: 5

[109] Knight & Howes 2003

[110] Knight & Howes 2003

[111] Abou – Zeid 2004 in Ledford & Berge 2008

applicable to both the individual and the collective.[112] The following diagram is an illustration of the manifestation of these categories.

Individual		Collective
Explicit	Embrained knowledge	Encoded knowledge
Tacit	Embodied knowledge	Embedded knowledge

Table 2.2 Cognitive Level – Knowledge Types (Lam 2000)

Abou-Zeid's categorisation of the four types of tacit knowledge differs slightly from the above. He identifies 'embrained' ('know what'), 'embodied' ('know how'), 'embedded' and 'encultured'. The encoded or explicit knowledge has been replaced by the 'encultured' knowledge.[113] Liew has encapsulated some of the features of the two categorisations in his definition of knowledge. He posits that "[k]nowledge is the (1) cognition or recognition ('know-what'), (2) capacity to act ('know-how'), and (3) understanding ('know-why') that resides or is contained within the mind or in the brain."[114]

UNESCO have also provided four distinctive types of knowledge which they claim would assist learning societies in their quest to identify the types of knowledge that are most appropriate in any given situation. These four types of knowledge are given as "'descriptive knowledge (facts and information), procedural knowledge (answering "How?" questions), explanatory knowledge (answering "Why?" questions) and behavioural knowledge."[115]

For the purposes of this study the definition that perceives knowledge as 'capacity to act' will be adopted, as it captures the essence of knowledge in the context of an organisation. It implies that the presence of knowledge should spur the owners to take some form of action, which includes but is not limited to decision-making.

Fei, Chen S. and Chen S. L. have identified distinctive components of knowledge which they view from epistemological and ontological perspectives.[116]

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[112] Lam 2000: 39

[113] Ledford & Berge 2008: 8

[114] Liew 2007: 4

[115] UNESCO World Report 2005: 60

[116] Fei, Chen & Chen 2010, see also Filstad 2007 who argues that learning and knowing are inextricably linked and involve epistemological and ontological dimensions.

Epistemological

Tacit ↑

-Skills/expertise -Experience -Attitudes	-Culture -Image -Customer and supplier relationships -Other external relationships
-Education -Training	-Technologies and information systems (databases, intranets etc.) -Process manuals -Intellectual property

Explicit

→

Individual   **Organisational**   **Ontological**
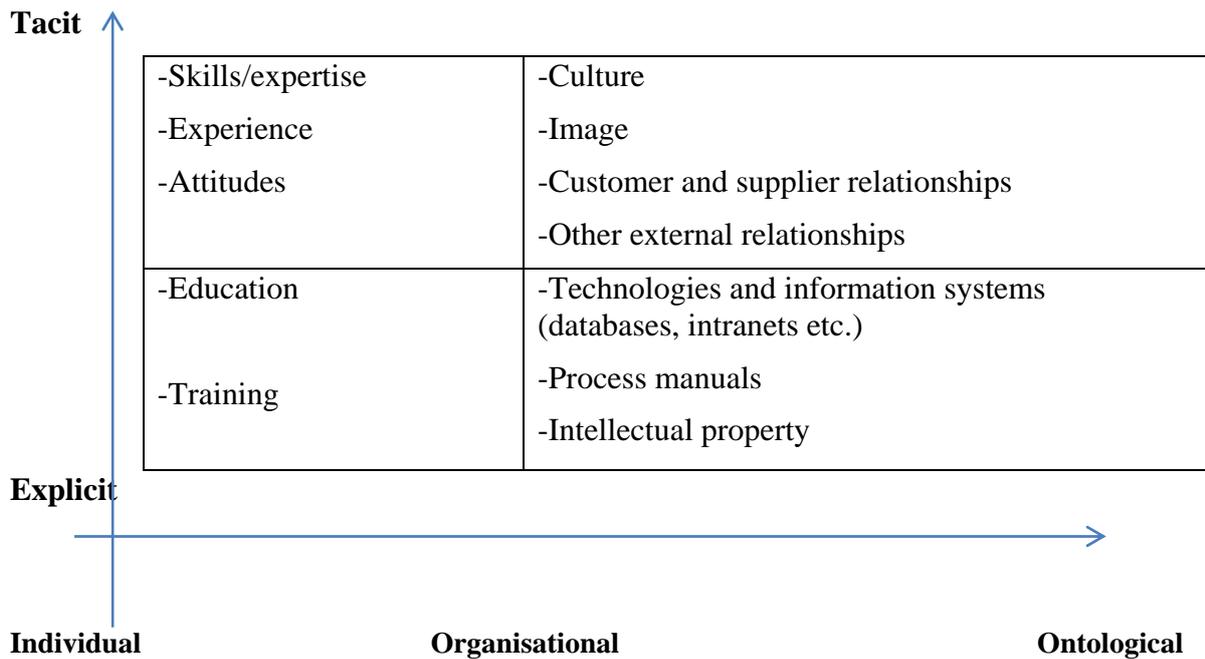
Table 2.3 Knowledge components in an Organisational Knowledge Based matrix

According to Fei et al[117] the 'individual tacit knowledge' component encompasses the skills that have been acquired through education and accumulated experience. The skills are always displayed in the manner in which the individual solves problems and makes decisions.[118] In the same component there is also the element of experience, which comes about as a result of the individual's length of service in that organisation or industry and in turn reflects richness of personal knowledge.

With regards to attitudes, this component is as pivotal as the other two, in that the attitudes displayed by an individual to their work is indicative of how that individual will perform the tasks assigned to them.

The 'individual explicit knowledge' component is made up of two elements, education and training, which are interrelated. Education in a specific field enables an individual to acquire the necessary qualifications to enable him/her to become an expert in their respective field. Training is designed to enhance the quality of knowledge possessed by the individuals and give him/her a higher quality of knowledge that enables them to execute their functions even

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[117] Fei, Chen & Chen 2010: 327

[118] Fei, Chen & Chen 2010: 326

better.

In the organisational tacit knowledge component there are three salient features of an organisation that have a direct bearing on the knowledge reservoir of an organisation. Culture plays an invaluable role in any organisation. According to Fei et al., culture manifests itself in the articulated vision, mission and story of a respected leader of an organisation. An organisation's image and reputation within its community is of paramount importance to the value proposition. Lastly, external relationships also constitute a vital cog in the organisational tacit knowledge component of an organisation.

The 'organisational explicit knowledge' component is composed of technologies and information systems, process manuals and intellectual property (patents, trademarks, registered designs and brands).[119] This category constitutes the organisation's knowledge assets that translate decisions into tangible and reusable commodities at the disposal of the organisation's employees.

The invaluable role played by knowledge is discernible in the analysis provided by Bennett and Jessani when they maintain that "[r]esearchers must recognize that the right knowledge is the most valuable resource of any society, organisation, or individual. It determines what they do, how they do it, and the probable results of their action—in every context, always. It is also important to recognise that knowledge renders this value only when it is translated, transmitted, and used."[120]

2.4.3 The Utility Value of Knowledge

The 'tacit versus explicit' knowledge dichotomy that was popularised by Michael Polanyi[121] and further explored by Nonaka[122] when he introduced the Socialisation, Externalisation, Combination and Internalisation (SECI) Model can hardly be ignored in any discussion of knowledge. Explicit knowledge can be recorded and easily organised (e.g., on computers). This includes research findings, lessons learned, toolkits, and so on. Bennett and Jessani have captured the distinction between these two concepts as follows: "Tacit knowledge is subconscious—we are generally not even aware that we possess it. It is context-specific and includes, among other things, insights, intuitions, and experiences. Capturing this is more

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[119] Fei, Chen & Chen 2010: 327

[120] Bennett & Jessani 2011: 25

[121] Polanyi 1958

[122] Nonaka 1995

difficult and involves time and personal interaction".[123]
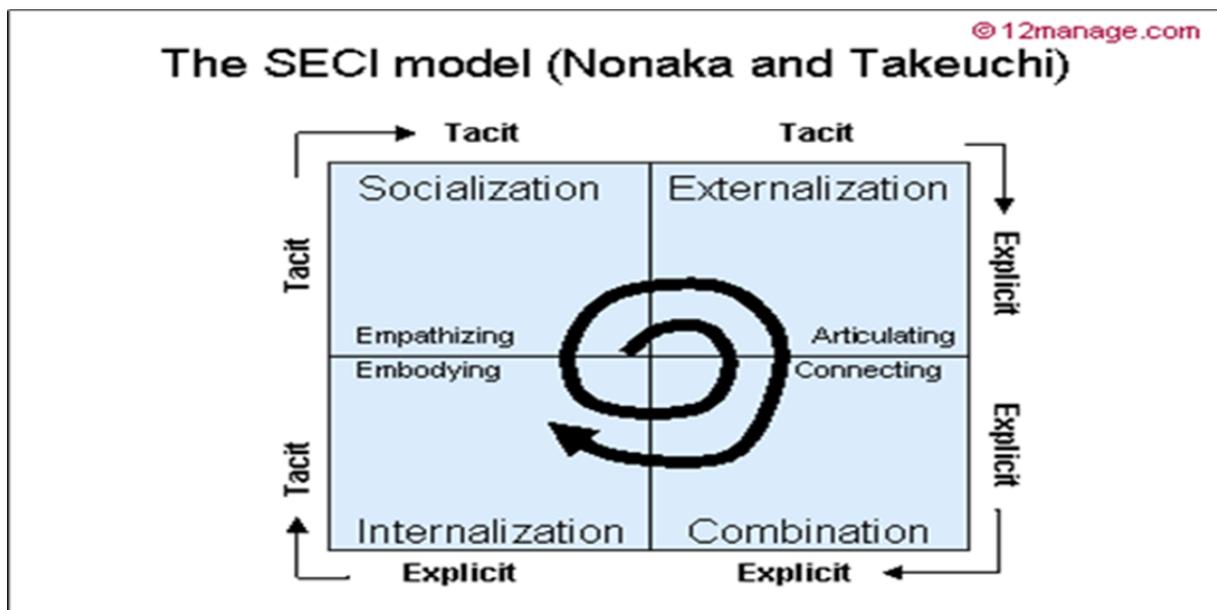
Figure 2.2 Nonaka and Takeuchi's SECI Model (1995)

Nonaka and Takeuchi's model characterises the various facets of knowledge usages into four distinctive but interfacing stages within the tacit and explicit dichotomous relationship.[124] It states that the creation of knowledge is a continuous process of dynamic interaction between tacit knowledge and explicit knowledge. The four aspects of knowledge conversion interact in the spiral of knowledge creation. The spiral increases in scale as it moves up through the organisational levels and in the process it triggers new spirals of knowledge creation.

Nonaka suggests four models of knowledge conversion, which have since received close scrutiny. These dimensions relate to the conversion of knowledge from individuals to groups and to organisations. He further expounds that "[t]he assumption that knowledge is created through conversion between tacit and explicit knowledge allows us to postulate four different 'modes' of knowledge conversion: (1) from tacit knowledge to tacit knowledge, (2) from explicit knowledge to explicit knowledge, (3) from tacit knowledge to explicit knowledge, and (4) from explicit knowledge to tacit knowledge".[125]

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[123] Bennett & Jessani, 2011 , p25

[124] Nonaka & Takeuchi (1995)

[125] Nonaka 1995: 19

These 'modes' or processes of knowledge conversion have been assigned labels according to the nature of the actual conversion. The process of converting tacit knowledge to tacit knowledge through sharing of experiences is called "socialisation". People come together and share whatever knowledge they possess through this process of interaction. Mentoring and apprenticeships are quintessential types of this knowledge sharing process. The apprentices or mentees are assumed to be learning from the expert whilst the expert is performing his/her tasks. [126]

The process of creating knowledge through interaction using language is called "combination". It is the process that entails converting explicit knowledge to explicit knowledge. The last two processes involve both tacit and explicit knowledge, which is indicative of the fact that these two processes are designed to complement each other and are always involved in a social symbiotic process.[127]

The third process is referred to as "externalisation", whilst the fourth is called "internalisation". The former entails translating tacit knowledge into explicit knowledge and thus enabling other beneficiaries to tap into the knowledge that has been made available from the brains of the experts. The latter entails converting explicit knowledge into tacit knowledge and thus imbibing or absorbing what one learns into the memory bank for future reference.

Van Straten[128] has developed a model that clearly demonstrates how knowledge is generated and ultimately utilised in the context of a knowledge-based organisation. The cycle below is an exposition of the cyclic nature of knowledge in that context.

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[126] Bratianu 2010: 194

[127] Bratianu 2010: 194

[128] Van Straten 2009, Discussion Document

Knowledge Assets Usage Cycle
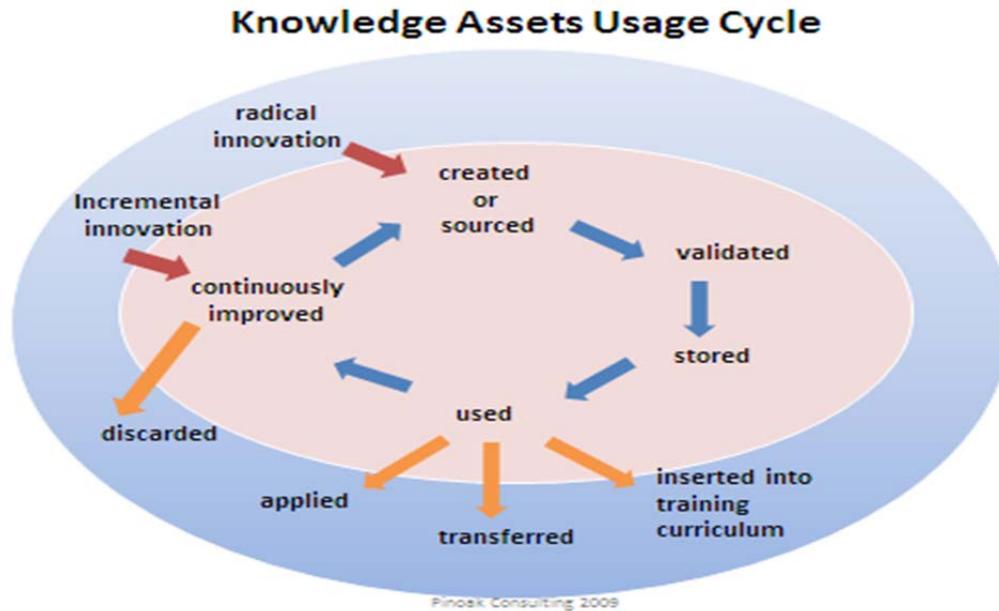
Figure 2.3 Knowledge Assets Usage Cycle

The Knowledge Assets Usage Cycle is useful for the purposes of this study in that it clearly illustrates the process undertaken to generate knowledge in an organisation. The first part shows that knowledge is either created by people within the organisation or, if it is not available and the task of creating it seems insurmountable, it is externally sourced. Once that knowledge is found, its authenticity or utility value is validated and it is then stored. When the time is ripe for it to be used, it is deployed by being applied to the relevant area or transferred to those who are best placed to discharge it expediently. For knowledge to attain longevity and continue to benefit the organisation it needs to be continuously improved, but once it is no longer relevant or valid, it should be discarded and new knowledge should be sought by restarting the cycle; that is, by creating new knowledge or sourcing it from external experts.

Knowledge is also capable of being improved to ensure that its efficacy is sustained for longer periods, otherwise it can become useless. Van Straten has suggested twelve implementable steps that an organisation could follow to enable itself to enhance or improve the quality of knowledge at its disposal.[129]

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[129] Van Straten 2009: 16

2.5   Knowledge transfer

2.5.1   Definition of knowledge transfer

The key questions this study will be dealing with are; firstly how much knowledge has been transferred from the experts to the individuals and, consequently, to the organisation? Secondly, how can we deepen or broaden the knowledge that has been transferred, if only a few individuals and not the organisation have benefitted from the transfer of knowledge? These are critical questions if one considers the correlation between the value of knowledge transfer and creation of a competitive advantage for an organisation. This is amplified in the statement expressed by Cong and Pandya, when they assert that, "As knowledge transfer is increasingly recognised as a source of value creation, organisations have come to identify knowledge management initiatives as strategic facilitators of competitive advantage."[130] However, the definition of knowledge transfer is also critical at this stage.

Knowledge transfer could be defined as activities that are undertaken to shift knowledge from those who possess it to those who are in need of it.[131] As a consequence thereof, there is bound to be one unit of the organisation that benefits from the knowledge that has been passed between the two parties. Lard and Ward define it as "nominally concerned with the process of moving useful information from one individual to another person. Notably, in order for this transferred information to have utility, it must be critical in the success of the organisation."[132] Rick et al. have expressed the same sentiments. They argue that "[k]nowledge transfer at the organisational level is typically characterised as a situation in which one organisational unit is affected by the experience of another unit".[133] The movement of good ideas from one part of the organisation to others to ensure its utilisation and thus improvement in the quality of ideas has also been noted by other scholars.[134]

It would seem, therefore, that at this level of interaction this situation is characterised by intra-organisational transfer of knowledge that is of symbiotic benefit to various units, and assists the organisation in its quest to improve organisational learning and, hence, performance. The extent to which this knowledge is transferable and ultimately transferred to

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[130] Cong & Pandya 2003: 28

[131] Zarinpoush, Von Sychowski & Sperling 2007: 3

[132] Ladd & Ward 2002: 3

[133] Rick, Weber & Camerer 2007 p1

[134] Levine & Gilbreth: 1998, Gordon 2003.

the recipients largely depends on several factors, one of which is the capacity of the recipients to absorb such knowledge, which Rick et al. refer to as the "absorptive and retentive capacity".[135] This transfer takes many forms and usually occurs through methods such as internships, apprenticeships, conversations, associations, social and interpersonal interaction and simulations.[136]

Davenport and Prusak are in favour of unstructured methods of knowledge transfer (such as meeting in a company cafeteria and engaging in informal chat) in addition to the established methods (such as the long apprenticeship or the fostering of a mentoring relationship) that are designed to ensure that the receiver is assured of the acquisition of a lot of detailed knowledge over a long duration. These informal chats, they argue, are often perceived by management as time-wasting since they sometimes revolve around sports, politics and other such topics; however, employees do eventually discuss work-related challenges, and suggestions or solutions inevitably emerge.[137]

They also argue that organisations need to consider opening up space for these spontaneous chats to thrive, because they lend themselves to unexpected discoveries and could generate novel ideas that have a potential of resolving long-standing problems.[138] They also contend that there is an abundance of knowledge in organisations; however, the major challenge is the fact that there is no guarantee that this knowledge is going to be used or transferred to those who need it most.

Those who are meant to benefit from the process are supposed to adopt this knowledge once their capacity to grasp it has been developed (in other words, once they understand the knowledge that is being transferred and they are able to utilise it). Mechanisms that could be employed to promote knowledge transfer intra-organisationally include adopting some of the mundane and commonly-practised human resource strategies such as training and providing incentives for sharing or transferring knowledge; creating a structure that would stimulate and foster knowledge transfer and, lastly, providing the ideal technology that would facilitate user-friendly methods of transferring knowledge.[139]

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[135] Rick et al 2007: 3

[136] Turban et al 2006: 370

[137] Davenport & Prusak 2000: 90

[138] Davenport & Prusak 2000: 96

[139] Levine & Gilbreth 1998: 5

Ledford and Berge point out that there are daunting challenges that impede the process of knowledge transfer in organisations, which sometimes result in this process being stifled, incomplete or abandoned altogether. Among these barriers, they count the "anti-trust issues embedded in the organisational culture, the ownership rights, and inappropriate skills level."[140] The level of trust seems to be one of the key impeding factors of knowledge transfer. For instance, Davenport and Prusak contend that "[n]ot respecting or trusting the source of knowledge is an important factor. Pride, stubbornness, lack of time, lack of opportunity, a fear of taking risks (in a company that punishes mistakes) are others."[141] These are the critical impediments of knowledge transfer that organisations constantly have to guard against.

Davenport and Prusak[142] refer to these barriers as "frictions" and have tabulated a list of these frictions and their possible solutions:

Friction	Possible Solution
Lack of trust	Build relationships and trust through face-to-face meetings
Different cultures, vocabularies, frames of reference	Create common ground through education, discussion, publications, teaming, job rotation
Lack of time and meeting places; narrow idea of productive work	Establish times and places for knowledge transfers: fairs, talk rooms, conference reports.
Status and rewards go to knowledge owners	Evaluate performance and provide incentives based on sharing.
Lack of absorptive capacity	Educate employees for flexibility; provide time for learning; hire for openness to ideas.
Belief that knowledge is prerogative of particular groups, 'not-invented-here' syndrome.	Encourage non-hierarchical approach to knowledge; quality of ideas more important than status of source.
Intolerance of mistakes or need for help.	Accept and reward creative errors and collaboration; no loss of status from not knowing everything.

Table 2.4 Friction and Possible Solution Source: Davenport and Prusak (2000)

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[140] Ledford & Berge 2008: 4

[141] Davenport & Prusak 2000: 103

[142] Davenport & Prusak 2000: 97

The predominant culture of an organisation has been cited by scholars as one inhibitor that usually stands in the way of knowledge transfer and tends to prevent it from finding fertile ground in most organisations.[143] Mintzberg has defined culture eloquently as follows: "Culture is the soul of the organisation – the beliefs and values, and how they are manifested. I think of the structure as the skeleton, and as the flesh and blood. And culture is the soul that holds the thing together and gives it life force."[144] The image conjured by Mintzberg is that of culture as the *de facto* phenomenon that serves as a glue that holds the disparate parts of an organisation together. Organisational culture manifests itself in stories, rituals, symbols and the predominant language spoken. The only way to adapt to it or be assimilated into the organisational culture is through being socialised into it by those who have been there before you.

Ladd and Ward have identified four basic organisational cultures that pose a threat to the phenomenon of knowledge transfer. These cultures are "[o]penness to change or innovation', 'task-oriented', 'bureaucratic' and 'competition or confrontation.'"[145]

The first two, 'openness to change or innovation' and 'task-orientation', are conducive to cultivation of a culture of knowledge transfer, whilst the last two, 'bureaucratic' and 'competition or confrontation', tend to stifle it. In a bureaucratic or confrontational environment employees are inclined to hoard their knowledge for fear of being frustrated and their ideas suppressed.[146]

The transfer or sharing of knowledge occurs at various levels of the organisation with similar benefits if the participants have the same objective of benefiting the organisation. It happens from one individual worker to a group of workers, between departments, between organisations and, as in the case of the Department under review, between citizens of distant countries.

2.5.2   Barriers to knowledge transfer

Knowledge transfer is hugely impacted by constant human mobility. It is therefore advisable that there be mechanisms put in place to stem the tide of human mobility or staff turnover, or,

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[143] Lard & Ward 2002; Davenport & Prusak 2000

[144] Mintzberg 2000

[145] Ladd & Ward 2002: 4

[146] Ladd & Ward 2002: 5

alternatively, to retain the knowledge staff possess within the organisation, so that even if the owners of that knowledge depart, their departure will not adversely affect the organisation.[147]

It has been suggested that in some instances knowledge transfer becomes an elusive phenomenon, with barriers preventing it from even getting off the ground. These barriers are largely man-made and can obviously be circumvented. The barriers to knowledge transfer in organisations are context, relationships, organisation, individual, knowledge and mechanisms. These concepts are not necessarily barriers in and of themselves; however, in different contexts they pose a serious threat if they are not treated with circumspection.

The following is a graphical representation of the six phenomena that have been highlighted above that pose a serious challenge to knowledge transfer:

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[147] Fei et al 2010: 331

Factors	Description
Context	Highly regulated industry International workforce
Organisation	Remoteness of management and workforce Low organisational commitment
Relationship	Linguistic barrier Different cultural backgrounds Temporal relationship due to high mobility Strict hierarchy Low trust
Individual	Lack of willingness to share and low motivation to learn due to low trust Low commitment to the organisation Lack of motivation to learn due to the temporality of the career
Knowledge	Highly experiential versus written rules and instructions
Mechanisms	Apprenticeship/cadetship Formal/informal networking Job rotation Formal/informal training Written reports, procedures and manuals

Table 2.5   Barriers to knowledge transfer[148]

There are three imperative ingredients of effective knowledge transfer. If they are present, an organisation is destined to thrive as a knowledge-based organisation. These ingredients are technology, culture and leadership. Technology as the enabler is a catalyst that facilitates the transfer of knowledge in organisations. The following knowledge-transfer technologies are commonly used. These are data mining techniques, electronic data exchange technologies,

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[148] Fei et al 2010: 331

electronic mail, groupware, telephone, fax, video conferencing, electronic bulletin boards, knowledge repositories, knowledge directories and knowledge networks.[149]

Notwithstanding its popularity and its utility value, technology does have its limitations, which can only be mitigated by focusing on the other two elements of the equation. The human element (and thus the culture of an organisation) plays a critical and indispensable role that complements the role of technology. The dominant culture, in whatever shape or form it manifests itself, affects knowledge transfer in an organisation. Fei et al. aver that "[t]he culture of individualism versus collectivism affects the extent to which knowledge can be transferred or shared in an organisation. Where norms and practices advocate and reinforce the supremacy of individual knowledge, activities of knowledge transfer and sharing are limited. Furthermore, the level of trust that exists between the organisation and its employees greatly influences the amount of knowledge that flows both between individuals and from individuals into the organisation's databases."[150]

Trust among co-workers seems to be the common element that should be fostered to nurture knowledge transfer and sharing. Fei et al. are advocating for both formal and informal networks. Most importantly, the informal social networks that revolve around converging during tea or lunch breaks for sharing ideas are ideal platforms for the reinforcement of this culture of knowledge transfer.

There are also tensions that sometimes become sewn to the fabric of certain organisations, and these tensions or contradictions play a significant role in the extent to which these organisations become capable of transferring knowledge. These tensions are (a) their historical embeddedness, which incorporates the benefit of past experience but also can militate against change; (b) their leadership and authority systems, which can both facilitate learning and impose controls that impede it; and (c) their internal and external boundaries, which can provide channels for new information but also create barriers for its assimilation.[151]

Childs and Heavens espouse the view that the only viable way to foster learning within and across boundaries (or, in other words, to overcome tensions) is to create communication networks that would transcend all the traditional hierarchical boundaries, notwithstanding the

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[149] Fei et al 2010: 335

[150] Fei, et al 2010: 336

[151] Childs & Heavens 2001: 308

fact that senior managers would still wish to exercise control over these communication networks and thus still be in control of what knowledge is made available to whom and how.[152]

The third most fundamental element that needs to be present in order for knowledge transfer and sharing to occur is leadership. Leadership is a cornerstone upon which an organisation's continued existence or demise depends, through the reinforcement of a supportive culture.[153] There are many mechanisms that could be explored by leadership to ensure that knowledge transfer thrives. Fei et al. argue that one of the most important of these mechanisms is to remove all the barriers that inhibit knowledge transfer and provide incentives to stimulate it. The influence that culture, leadership and technology exert on knowledge transfer and thus on organisational knowledge is represented graphically as follows:
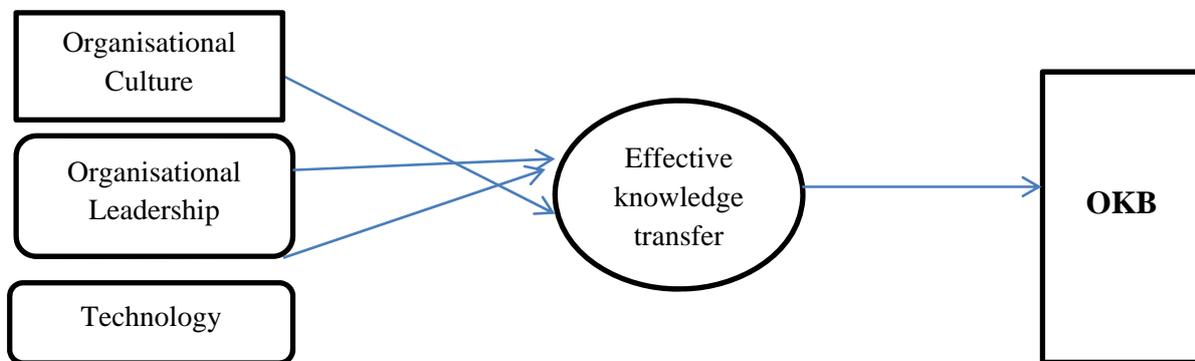
Figure 2.4 Effective knowledge transfer practices (Fei et al 2010)

2.6   Knowledge transfer strategies

There are several knowledge transfer strategies that have been posited by various scholars. These have been credited with stimulating transfer of knowledge if they are utilised properly. Hereunder are some of the viable strategies that have been used in the corporate world.

Strategy	Explanation
1. **Best Practice Meetings**	Too often we assume that best practices occur outside our organisations. But it is possible that the organization has its own existing best practices. These can be shared in meetings.
2. **Critical Incident**	First described in the 1950s, the critical incident method takes its

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[152] Childs & Heavens 2001: 323

[153] Fei, Chen & Chen 2010: 337

Interviews or Questionnaires	name from tapping the lessons of experience. A critical incident is a difficult (critical) situation (incident). By documenting the lessons of experience from the organisation's most experienced performers, the organisation can capture the fruits of experience. Of course, by documenting such "difficult cases" and how they were handled the organization is also laying the foundation for the development of a manual or automated expert system. Critical incidents provide an excellent foundation for training.
3. Expert Interviews	Sessions where one or more people who are considered experts in a particular subject, program, policy or process, etc., meet with others to share knowledge. Expert interviews can be used in many ways, including capturing knowledge of those scheduled to leave an organisation, conducting lessons-learned debriefings and identifying job competencies.
4. Expert Systems	An expert system, usually automated, is organised around problems and how to troubleshoot them. A simple example is the "context-sensitive help" on most word-processing programs. Common or difficult problems are logged into the system. Advice about troubleshooting and solving those problems is also provided in the system. This approach, while requiring more technological sophistication, places information at the fingertips of even the least experienced performer, giving him the ability to perform like a professional.
5. Information Exchanges	Have you ever attended a career fair? If you have, you have seen one form of information exchange. The same basic approach can be used for information exchanges. When this strategy is used, veteran performers sit at booths and dispense wisdom to less-experienced performers who visit them.
6. Internships	Formal arrangements where an experienced person passes along knowledge and skill to a novice who, after a designated period of time, reaches the journey level. This includes the summer

		internships used by many state agencies.
7.	**Job Aids**	These are tools that help people perform jobs in real time. They include things such as checklists, flow diagrams, reference tables, decision tree diagrams, etc. that provide concrete information to the user and serve as a quick reference guide to performing a task. Knowledge can be stored in aids and accessed through low-tech methods when the need arises. Job aids are not the actual tools used to perform tasks, such as computers, measuring tools or telephones.
8.	**Job Rotation**	A form of training that involves moving an employee from one workstation to another. In addition to achieving the training objectives, this procedure is also designed to reduce boredom.
9.	**Knowledge Audits**	Knowledge audits help an organisation identify its knowledge assets, including what knowledge is needed and available. They provide information on how knowledge assets are produced and shared and where there is a need for internal transfer of knowledge.
10.	**Knowledge Fairs**	These events showcase information about an organisation or a topic. They can be used internally to provide a forum for sharing information, or externally, to educate customers or other stakeholders about important information.
11.	**Knowledge Maps**	These catalogue information/knowledge available in an organisation and where it is located. They point to information but do not contain it. An example is an Experts or Resource Directory that lists people with expert knowledge who can be contacted by others in need of that knowledge.
12.	**Lessons Learned / Debriefings**	Debriefings are a way to identify, analyse and capture experiences, what worked well and what needs improvement, so others can learn from those experiences. For maximum impact, lessons-learned debriefings should be done either immediately following an event or regularly, with results shared quickly

	among those who would benefit from the knowledge gained.
13. Mentoring	In mentoring, an experienced, skilled person (mentor) is paired with a lesser skilled or experienced person (protégé(e)), with the goal of developing or strengthening competencies of the protégé(e). Rarely is the mentor a supervisor, since effective mentors should usually have no interest in the development of their mentee. Successful people have usually had one or more mentors in their career and mentors offer advice on what to do, how do to it and why it is worth doing in a situation. Such programs can, of course, facilitate knowledge transfer
14. **Skills Inventory**	Used to generate information about the knowledge and skills individuals possess that come from previous employment or activities outside the work environment. May be gathered through questionnaires or interviews.
15. **Storyboards**	A storyboard is literally a group of pictures that tell a story. Think of a series of pictures on a wall or a poster that is intended to show how someone should perform in a specific situation. Storyboards can be used in storing and transferring knowledge.
16. Storytelling	Most wisdom in organisations is passed on through storytelling. A story is a description of what happened in a situation to illustrate a point and effectively transfer knowledge. Most people have heard many stories about their organisations. An organisational story is detailed narrative of management actions, employee interaction or other intra-organisational events that are communicated informally within the organisation. If you hear "what really happened" in a promotion, demotion, termination or transfer, you are hearing a story. Storytelling is less structured than critical incidents but can serve the same ends. It can be a most effective way of transmitting wisdom from one person to another.
17. **Training**	Training encompasses a large variety of activities designed to facilitate learning (of knowledge, skills and abilities or

| | competencies) by those being trained. Methodologies can include classroom instruction, simulations, role-plays, computer or web-based instruction, small and large group exercises and more. It can be instructor-led or self-directed in nature. |

Table 2.6 Knowledge Transfer Strategies Source: IPMA News: Feb.'04[154]

The above-mentioned knowledge transfer strategies are by no means an exhaustive list. However, they have been proven to be catalysts in their own respective rights if conditions are created in which unadulterated transfer of knowledge can thrive.

2.7 Conclusions

Having explored various definitions of key concepts such as 'learning', 'organisational learning', 'knowledge' and 'knowledge transfer', it is critical at this juncture to underscore the definitions that this research is premised on.

With regards to learning, the apt definition is the one that views learning as 'the capacity to create something'. This definition also accentuates the fact that learning entails exhibiting inherent changes in the individual's behaviour. Most importantly, it indicates that learning refers to both process and outcome; the former referring to how one learns and the latter to what one acquires in that process.

With regards to organisational learning, in this research the aforementioned is premised on the definition that perceives it as the creation, retention and the transfer of knowledge within and from external sources. Its consequence is that there is something that changes within the organisation after it has occurred. For organisational learning to flourish, organisations need to take cognisance of its barriers, such as lack of shared language, values, knowledge and understanding.

The definition of "knowledge" that resonates with this research perceives knowledge as 'the capacity to act' or capacity for action and decision making. It implies that possession of knowledge enables one to act in a particular manner or make a critical decision and accordingly impact on the organisation's performance.

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[154]

http://www.cs.state.ny.us.successionplanning/workgroups/knowledgemanagement/strategies

Lastly, the definition of "knowledge transfer" that has been adopted for this research is the one that views knowledge transfer as a process of moving useful information from one individual to another, which benefits the organisation's performance. This transfer occurs through the embracing of methods including internships, apprenticeships, conversations, associations, social and interpersonal interactions and simulations.

These concepts are now carried forward into chapter 3 where the case study is discussed.

Chapter Three

The Case - Foreign Professionals in the Eastern Cape

3.1   Introduction to the case of six cuban professionals

In July 2007, a South African government delegation that included the then-Minister of Public Works paid a courtesy visit to Cuba. This delegation also included Members of the Executive Councils (MECs) of two provinces, namely the Free State and Western Cape, as well as public servants of that Department and other public entities. This visit was undertaken with the sole mission of signing a bilateral agreement between South Africa and Cuba to enable technical advisors who are in the field of architecture, engineering, project management and various other fields in the built environment to come to South Africa. This was designed to increase the pool of technical skills that are considered to be scarce and profoundly needed.[155]

A needs analysis for the requisite scarce skills was conducted prior to the delegation embarking on the trip to Cuba and all the provinces were afforded an opportunity to highlight skills they needed. The total number of Cubans sought by the provinces was 266, in various fields. Upon their arrival, the technical advisors were deployed to all the nine provinces. The Eastern Cape Department of Roads and Public Works was allocated six Cubans to provide the necessary technical expertise.

The main purposes of this recruitment drive were to "bridge the scarce-skills gap, enhance infrastructure development, and create a cadre of well-qualified artisans. This would, in turn,

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[155] Worx News June/July 2007 www.publicworks.gov.za Newsletter.

improve our economic output and boost job creation in the country."[156] This is the background against which the need to import Cubans to assist in knowledge transfer in the Eastern Cape should be perceived.

The six Cubans possessed qualifications in a variety of fields; one was an architect, two were quantity surveyors, two were civil engineers and one was a chief quantity surveyor. They had vast experience in their respective fields, having worked for various institutions in Cuba, including government. When they joined the Department, they were first introduced to the Senior Management during a Strategic Planning Session, where they were warmly received and made to feel welcomed. They were all placed at Head Office and were provided with office space, computers, vehicles, accommodation and all the other perks afforded to foreigners working in this country, which included a tax-free salary. They were all assigned supervisors and peers they were expected to work with and, by implication, mentor and transfer their knowledge to.

3.2   Case analysis design
3.2.1. Methodology

This case study used a combination of both the qualitative and quantitative methods of data collection and analyses. This approach is referred to as the "triangulation" method. Leedy[157] defines triangulation as a process of utilising multiple data collection methods, data sources, analyses or themes to determine the validity of findings.

This case study relied on both of these research methods, as each is a barometer that would indicate the extent to which the organisation has managed to undergo a metamorphosis as a result of organisational learning stimulated by the skills transferred by the foreign experts. The qualitative and quantitative approaches complement each other; whatever response one approach misses, the other approach picks up.

For the thesis as a whole, a comparison of the findings from the case study with alternative ways of ensuring knowledge transfer (as indicated in chapter 4) brings a further perspective to the topic. Between the findings from the case study and alternative strategies enough data is generated to draw some useful conclusions for the topic.

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[156] Worx News June/July 2007 www.publicworks.gov.za Newsletter

[157] Leedy 2001

3.2.2. Data collection procedures

There were two rounds of data collection to reach an understanding of the nuances of relationships that were at play in the chosen Department which influenced the nature of interaction that took place between the employees of the organisation and the foreign experts. The first round consisted of a set of questionnaires which was distributed among the employees of the Eastern Cape Department of Roads and Public Works who were in daily contact with the Cuban experts, whether they worked with them directly or indirectly. The questionnaires were distributed and later collected to analyse the responses.

The second round of questions entailed the use of in-depth structured interviews with a selected number of employees who could shed light on the attitudes, behaviour and work ethos exhibited by the Cuban experts over the duration of their stay in the country. The reason for this was to be able to elicit the kinds of responses that would enable the researcher to make conclusive findings.

The timing of the interviews was designed to coincide with the employees' lunch break or week-ends at their homes so as not to infringe on their work obligations. When the task of interviewing as many workers as possible proved to be cumbersome, thus requiring assistants, the services of additional field-workers were enlisted. The interviews were used to clarify or interpret deeper aspects that emerged from the analysis of the survey responses.

A.   Sampling

The research was primarily focused on the Buildings Programme, which is Programme 2 of the Department of Roads and Public Works, located at Head Office from where the Cubans were deployed. The intention was to obtain responses from everybody involved in that Programme, from the general manager, to senior managers, down to managers, project managers and the other lower echelons.

Of the 47 employees that are stationed at Head Office, 31 participants completed questionnaires, some of whom sought assistance from the researcher with some of the questions they did not understand.

B.   Method of Data Collection

Due to the fact that the data was found at a central location (where the researcher also works) and there was no travelling involved, data collection was fairly easy. It was a case of door-to-door visits in the relevant offices where the Buildings Programme employees are placed.

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The researcher established a good rapport with the respondents, explained to them the essence of and results that would accrue from the research and made earnest appeals to them to undertake the task. The subsequent response was more positive than anticipated.

C.   Method of Data Analysis

The analysis of the survey results was conducted with the assistance of a statistician. The most important statistical results are presented and discussed below.

The survey results were followed up with face-to-face interviews with a small sample of 12 individuals within the division or component at the Department of Roads and Public Works, who would shed light on the significant aspects that became apparent through the survey. The interviews did indeed contribute greatly to the findings that are reported below in this chapter.

3.3   The survey

3.3.1. Survey statements

The survey comprised of the statements below.

Respondents were asked to choose between

a)   Strongly Agree   - 1
b)   Agree   - 2
c)   Neutral   - 3
d)   Disagree   – 4
e)   Strongly Disagree   – 5

1   The Department of Public Works is experiencing an acute shortage of technical skills in particular to function at maximum level.

2   The importation of six engineers from Cuba to the Department of Public Works was a masterstroke to alleviate the challenge of scarce skills.

3   The six engineers from Cuba are very critical in the implementation of the core mandate of the Department.

4   The Department of Public Works encourages the transfer of knowledge/skills in general.

5   The six engineers from Cuba have been provided with a good environment to effectively transfer their knowledge.

6   There are readily available personnel or interns who are willing to learn from the Cuban engineers

7   Language is a barrier to the transfer of knowledge between the Cubans and the South Africans.

8   Culture is a barrier to the transfer of knowledge between the Cubans and the South Africans.

9   By the time they leave South Africa when their contracts expire the Province will have benefitted from the knowledge they will have transferred.

10   More professionals like them are needed to increase the skills levels in the Province.

11   If there is money available it would be worthwhile to invite them to help with our JIPSA initiative by transferring skills to other potential South Africans.

12   At the Department of Roads and Public Works, Top and Senior Management allows for free exchange of knowledge to benefit the organisation.

13   Knowledge Management practices such as communities of practice, mentoring, exit interviews are common practice in the Department.

14   The Department of Public Works should rightfully be construed as a learning organisation.

15   Organisational learning and the transfer of knowledge can assist the Department to enhance service delivery

16   There is a lot that needs to be done to foster the culture of organisational learning.

17   The six engineers from Cuba have been responsible for mentoring learners or young professionals.

18   When coming back to the office after Project Management visits there is a briefing to enhance knowledge.

19   They took the initiative to get to know their co-workers to transfer their skills.

20   When they arrived they were properly introduced and their roles clearly spelt out.

21   They interacted freely with their co-workers and exchanged ideas.

22   Their co-workers accepted them and even socialised with them.

23   In the remaining period there is hope that the Department is going to extract as much knowledge as possible from them.

24   I would appreciate any form of knowledge even if it is recorded, verbal or written as long as it will enhance my capacity and thus enhance service delivery.

3.3.2   Theoretical grounding of questions

The conceptual backdrop of the survey – and the follow up interviews – was discussed in chapter 2. The definitions of core concepts as listed in 2.7 informed the questions of the survey, and the follow up interviews and discussions.

The survey was drawn up with the intention to elicit views, opinions and perceptions with regard to a number of themes – also discussed in chapter 2 – that are pertinent to the topic of knowledge transfer, and to organisational learning in general.

Below is a list of the themes and the questions/statements on the basis of which insight in the themes were developed

 a) *Perceptions about interaction of the Cuban experts with their co-workers*
    – questions 2, 9, 10, 22, 23.

    These questions are derived from Davenport and Prusak, who have been discussed extensively in Chapter 2. They advocate that for overcoming lack of trust, "Build relationships and trust through face to face meetings."[158] They also express the view that informal and unstructured methods are likely to yield positive results than the more rigidly structured methods used to create a positive ambiance between co-workers.

 b) *Perceptions about the Department of Roads and Public Works as a learning organisation*
    – questions 4, 14, 18, 19, 21.

    These questions are derived from Ledford and Berge, who advance the view that for a learning organization to be a reality "requires continual changes in the organisational internal environment, including culture, structure, job design, processes, technology, human, etc."[159]

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[158] Davenport & Prusak 2000: 103

[159] Ledford & Berge 2008: 5

c) *Perceptions pertaining to shortage of skills and promotion of organisational learning –* questions 1, 15, 16, 17, 24.

Rampersad's theory of the essence of organisational learning to mitigate the shortage of skills is what motivated these questions. His assertion in this regard is that an organisation needs to learn continuously and be able to list, develop, share, mobilise, cultivate, put into practice, review and spread knowledge failing which it will lose its effective competitive edge. Most importantly, pertaining to the issue at hand, he goes on to say that, "That is why the ability of an organization to improve existing skills and acquire new ones forms its tenable competitive advantage."[160]

d) *Perceptions of barriers to the transfer of knowledge –* questions 7, 8, 11, 12, 13.

The notion of barriers to knowledge transfer has received extensive coverage in Chapter 2; suffice it to say here Fei et al 2010 are the primary source that prompted this set of questions. In that Chapter they have been cited acknowledging issues pertaining to context (e.g. highly regulated industry), organisation (e.g. remoteness of management and low organisational commitment), relationships (e.g. issues of language, culture, temporal relationships, strict hierarchy and low trust), individual (e.g. unwillingness to share, low motivation to learn, low commitment to organization), knowledge (e.g. experiential versus written rules and instructions), and lastly, mechanisms (e.g. apprenticeship/cadetship, formal/informal networking, job rotation, formal/informal training, written reports, procedures and manuals.)[161] as potential barriers to knowledge transfer.

e) *Perceptions about the teacher – learner relationship during the transfer of knowledge –* questions 6, 8.

These questions are derived from Rick et al, who advance the view that there is a need for learners to possess what they refer to as "absorptive and retentive capacity[162]", whilst Turban et al propagate usage of internships, apprenticeships, conversations, associations,

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[160] Rampersad 2002: 3

[161] Fei et al 2010: 310

[162] Rick et al 2000: 3

social and interpersonal interactions and simulations, as means to transfer knowledge learner and teacher[163].

f) *Perceptions about the environment at the Department for knowledge transfer –* questions 3, 5, 12, 20.

This particular set of questions is derived from Starbuck and Hedberg, who see a symbiotic relationship between a learner and his/her environment that influences his/her ability to absorb knowledge. They argue that, "For learning to occur, a learner and an environment must be tightly linked, but the environment exerts much more influence on a learner than vice versa."[164] Furthermore, they argue, learners need to adopt their environments by being curious, playful, showing willingness to experiment and possess analytical skills.[165]

3.4 Survey results

3.4.1 General profile of respondents

The 31 respondents were classified by some biographical variables, namely, age, gender, position at work, experience and educational qualification.

The respondent group is biased towards males (77.4%) and head office (77.4%). It was also found that over 90% of the respondents had qualifications other than their academic qualifications. Those who had qualifications other than their academic ones had received training in project management from the TTMA at the University of Fort Hare. The distribution of respondents with respect to position, age and educational level is shown in the graphs below.

The bar chart below shows the distribution of respondents by position in the Department.

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[163] Turban et al 2006: 370

[164] Starbuck & Hedberg 2001: 333

[165] Starbuck & Hedberg 2001: 333
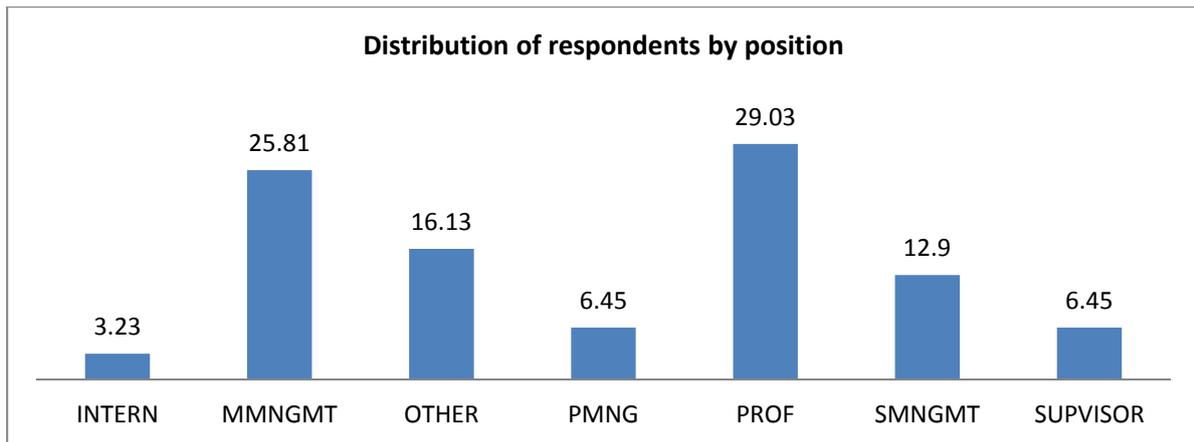
Figure 3.1 Distribution of respondents by position

The bar chart shows that the majority of the respondents were in the professional (29%) and middle management (25.8%) categories. There were just as many supervisors as there were project managers (6.5%) and the least represented were the interns with just over 3% representation. About 13% of the respondents were in senior management while the rest occupied other unspecified positions in the Department.
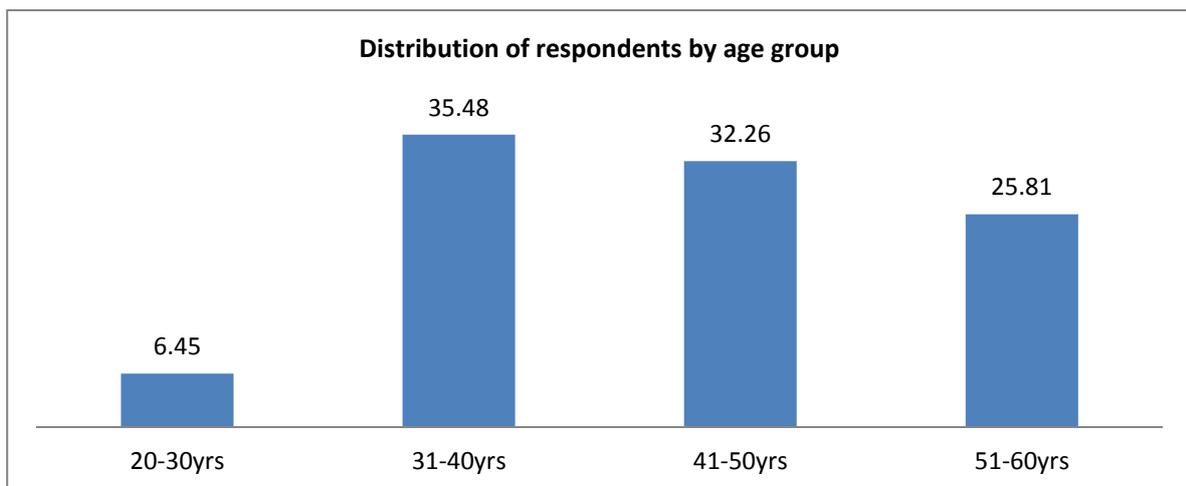
Figure 3.2 Distribution of respondents by age group

The least-represented age group was the under-30 years' with 6.5% representation and the most-represented was the 31-40 years group (35.5%), followed by the 41-50 years age group (32.3%). The rest (25.8%) were over the age of 50 years.

Distribution of respondents by educational level
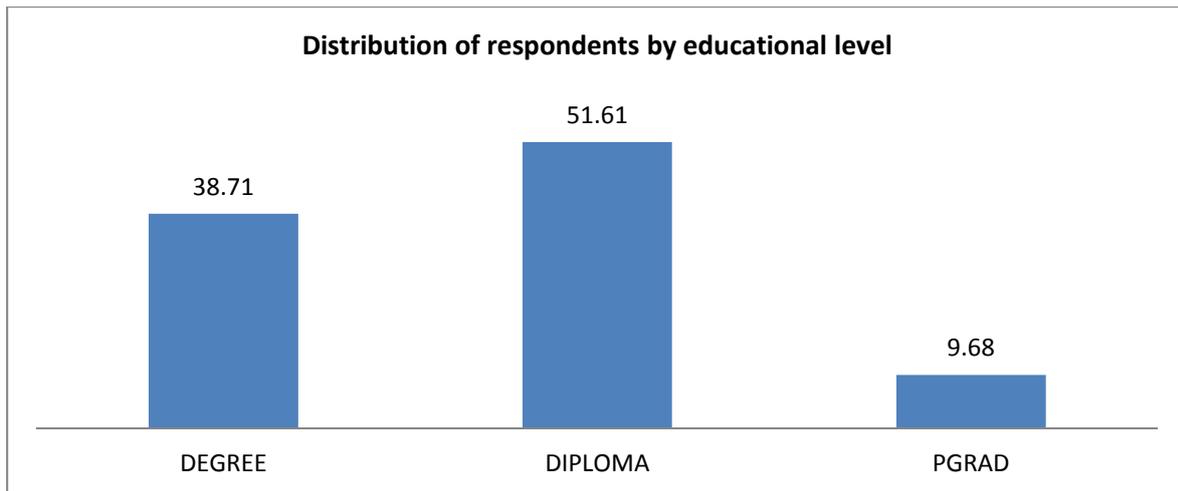
Figure 3.3 Distribution of respondents by educational level

Only 9.7% of the respondents had a postgraduate qualification and this was the least represented category. About 38.7% had a degree qualification while the rest had a diploma. Thus, the majority of the respondents had only a diploma (51.6%).

The mean overall experience of the respondents was 11.3 years (se 1.78) while mean experience at current position was 5.8 years (se 1.18). The experience levels were found to be significantly positively correlated (r=0.62; p=0.0002). However, this correlation would probably be expected since overall experience is typically part of the criteria for appointment and/or promotion.

3.3.2   Construct derivation

Constructs were derived from the 25 items on perceptions of departmental staff on the expatriate services and general issues related to skills transfer in the Department. An exploratory factor analysis was used to identify possible item groupings in the dataset. This was followed up with a cluster analysis which produced the same groupings as the factor analysis. These groupings, referred to as "constructs", are shown in the table below.

Of the 25 items, 19 could be grouped into 5 constructs as shown in the table below. The rest of the items could not be included in any of the variable clusters and were treated as stand-alone variables. A grouping is considered to satisfactorily represent a single construct if the reliability coefficient is at least 60% and, on that basis, items 1, 4, 5, 11, 13 and 14 were left as stand-alone variables.

Construct definitions

Construct description/label	No. of items	Cronbach's alpha
Expatriates' interactions with co-workers	7	0.91
Department as a learning organisation	3	0.79
Skills shortage and organisational learning	4	0.86
Transfer of skills	3	0.66
Appreciation of expatriate services	2	0.60

Table 3.1 Construct definitions

New variables were derived as arithmetic means of the items making up a particular construct. This would result in continuous values for the new variables and as such they are summarised using means and standard errors. The stand-alone variables are summarised using one-way frequency tables.

The frequency distribution tables for the stand-alone variables are given below together with a brief comment on each table. These are the items that could not reasonably fit into any one of the derived constructs. As such, they remain as variables measured on a five-point Likert scale.

Item 1	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Strongly agree	5	16.13	5	16.13
Agree	13	41.94	18	58.06
Neutral	6	19.35	24	77.42
Disagree	6	19.35	30	96.77
Strongly disagree	1	3.23	31	100

Table 3.2 Frequency distribution for stand-alone variables

Item 1 measured the perceptions of departmental staff about the idea of importing skills from Cuba as a way of alleviating the skills shortage challenges in the department. Just above 58%

of the respondents agree that this move was a masterstroke in addressing the skills shortage challenges. About 22% disagree or disagree strongly that this was of any benefit at all while 19.4% were not very sure about whether this was beneficial or not. This distribution of opinions could be related to the level of interaction of the respondents with the expatriates.

Item 4	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Strongly agree	7	22.58	7	22.58
Agree	15	48.39	22	70.97
Neutral	3	9.68	25	80.65
Disagree	5	16.13	30	96.77
Strongly disagree	1	3.23	31	100

Table 3.3 Language differences between expatriates and locals

Item 4 deals with the issue of language differences between expatriates and locals specifically in terms of whether it posed a barrier to the effective transfer of knowledge between the two. There was generally agreement that language was a barrier, with about 71% of respondents agreeing and just below 20% at least disagreeing. The remainder were, however, not so sure about the influence of language on skills transfer. These opinions would be expected since language is crucial for communication in the transfer of knowledge and skills.

Item 5	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Strongly agree	6	19.35	6	19.35
Agree	4	12.9	10	32.26
Neutral	7	22.58	17	54.84
Disagree	12	38.71	29	93.55

			Cumulative	Cumulative
Strongly disagree	2	6.45	31	100

Table 3.4 Respondents' perceptions of culture as impediment

Item 5 deals with issues of culture as an impediment to effective skills and knowledge transfer. About 32% of respondents at least agree that cultural differences have a negative impact on effective skills and knowledge transfer, 22.6% are neutral and about 45% at least disagree. While the majority of the respondents agree or strongly agree that language is a barrier, not so many agree that culture is a barrier. This suggests that cultural and language differences are not viewed the same way among the respondents.

Item 11	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Strongly agree	3	9.68	3	9.68
Agree	13	41.94	16	51.61
Neutral	5	16.13	21	67.74
Disagree	8	25.81	29	93.55
Strongly disagree	2	6.45	31	100

Table 3.5 Respondents' perceptions of orientation of expatriates

Item 11 deals with the introduction and orientation of expatriates on arrival. About 52% of the respondents at least agree that the expatriates were properly introduced and had their roles clearly spelt out to them on their arrival. About 16% were neutral and just over 32% disagree or strongly disagree that the expatriates had a proper orientation on arrival. These responses could be dependent on the level of contact the respondents had with the expatriates on arrival.

Item 13	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Strongly agree	6	19.35	6	19.35
Agree	16	51.61	22	70.97
Neutral	7	22.58	29	93.55

| Disagree | 2 | 6.45 | 31 | 100 |

Table 3.6 Respondents' perceptions of acceptance of expatriates

Item 13 deals with the acceptance of expatriates by their local co-workers. The majority of respondents at least agree (71%) that the expatriates were well accepted and socialised with co-workers. Only 6.5% disagree with that, while the rest were neutral.

Item 14	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Strongly agree	1	3.23	1	3.23
Agree	6	19.35	7	22.58
Neutral	6	19.35	13	41.94
Disagree	9	29.03	22	70.97
Strongly disagree	9	29.03	31	100

Table 3.7 Perceptions of seminars and workshops

Item 14 deals with the issues of seminars and workshops by expatriates. About 26% at least agree that the expatriates were afforded the opportunity to transfer their skills and knowledge through seminars and workshops, 20% were neutral and the remainder, who are the majority, disagree or strongly disagree that they were afforded that opportunity. This again seems to suggest that these responses depend on the level of involvement participants had with the expatriates.

3.3.3   Summary results of derived variables

The five constructs measured by the research instrument that was used are summarised below. The table contains the mean, standard error and the minimum and maximum values recorded. Based on the questionnaire, low values reflect agreement, while high values correspond to disagreement since the questionnaire was coded from strongly agree (1) to strongly disagree (5).

Variable	N	Mean	Std. Error	Minimum	Maximum

Expatriates' interactions with co-workers	31	3.00	0.17	1.57	5.00
Department as a learning organisation	31	2.99	0.16	1.33	5.00
Skills shortage and organisational learning	31	1.62	0.11	1.00	3.25
Transfer of skills	31	2.33	0.14	1.33	5.00
Appreciation of expatriate services	31	2.85	0.19	1.00	5.00

Table 3.8 Summary of Derived Variables

The lowest mean was 1.62 recorded for the 'skills shortage and organisational learning' construct. This indicates that the respondents generally agreed that there is a skills shortage and that more needs to be done to develop the quality of the organisational learning strategy of the department. This was followed by the 'transfer of skills and knowledge construct' with a mean of 2.33. This is an indication that the department generally allows for the exchange of knowledge. The rest of the constructs are quite close to the neutrality score of 3 with means of 3.00, 2.99 and 2.85 for the 'expatriates' interactions', 'department as learning organisation' and 'appreciation of expatriates' constructs. This suggests that the respondents were not really sure of the interactions of the expatriates with their co-workers and whether the department really is operating as a learning organisation. No clear opinion emerged regarding the respondents' appreciation of the expatriates' services.

However, these values may be different according to some biographical variables, namely position, educational level, experience and age.

To test for the effects of position, age group and educational level on the derived variables, the one-way analysis of variance was used since the independent variables have more than two categories. For the purposes of the significance testing the biographical variables were recoded. The 'educational level' variable was recoded to reflect whether one had a degree or a diploma as the highest qualification, while for position, senior and middle management were combined to simply 'management' and intern, supervisor and project management were combined into the category 'other'. Age groups one and two were combined into a single age group. This was done because the frequencies for the collapsed categories were very low and this impacts on the statistical analysis.

The distribution of means by the biographical variables 'age', 'educational level' and 'position' are given in the tables below.

Mean construct values by age group			
Construct	**Under 40yrs**	**40-50 yrs**	**Over 50yrs**
Expatriates' interactions with co-workers	3.4	3.0	2.4
Department as a learning organisation	2.9	3.1	3.0
Skills shortage and organisational learning	1.6	1.7	1.6
Transfer of skills	2.4	2.5	2.0
Appreciation of expatriate services	2.9	2.8	2.9

Table 3.9 Mean Construct Values by Age Group

From the table above, it appears the younger respondents were not satisfied with the level of interaction of the expatriates and their co-workers, while the over-50 year old age group seems satisfied. This is suggested by the means of 3.4 for the under-40s and 2.4 for the over-50s. The means for the 'department as a learning organisation' are around 3.0 which is a reflection of neutrality. That means the respondents were generally not sure where the department stands as a learning organisation. The same pattern is reflected for the 'appreciation of expatriate services' construct. However, based on the mean of less than 2 for the respective construct, there is general agreement that skills shortages can be addressed through transformation of the department into a learning organisation. These observations refer to all the age groups without showing any one group seriously deviating from the rest.

Below is the means table for educational level. The respondents with a degree seem to be more negative about the expatriates' interactions than those with diplomas. With respect to all the other constructs, there does not seem to be a difference in the two educational levels. The lowest means were recorded for the 'skills shortage and organisational learning' construct. The means are both below 2.0 (which represents agreement) for both educational levels. This is an indication that the respondents agree that skills shortage is a genuine issue that can be addressed through internal departmental efforts to enhance organisational learning.

Mean construct values by educational level		
Construct	**DIPLOMA**	**DEGREE**

Expatriates' interactions with co-workers	2.6	3.5
Department as a learning organisation	2.9	3.1
Skills shortage and organisational learning	1.7	1.5
Transfer of skills	2.3	2.4
Appreciation of expatriate services	2.7	3.0

Table 3.10 Mean Construct Values by Educational Level

With respect to position, there seems to be a difference in opinion between professionals and the rest of the positions regarding expatriate interactions and services. The professionals are more negative about the expatriates' interactions with co-workers, with a mean score of 3.7 compared to 2.8 and 2.6 for management and others respectively.

Mean construct values by position			
Construct	**MANAGEMENT**	**PROF**	**OTHER**
Expatriates' interactions with co-workers	2.8	3.7	2.6
Department as a learning organisation	2.9	3.1	2.9
Skills shortage and organisational learning	1.6	1.8	1.5
Transfer of skills	2.4	2.3	2.3
Appreciation of expatriate services	3.0	3.3	2.3

Table 3.11 Mean Construct Values by Position

The significance of the effects of the biographical variable on the constructs was tested using the two independent samples t-test for educational level and analysis of variance for age group and position. These tests showed that none of the constructs are really influenced by age group. This means that how a respondent feels about the issues addressed in the constructs has nothing to do with the age of the respondent.

The t-test for education effect showed that only the expatriates' interaction score significantly differed with educational level (t=2.86, p=0.0077). Those with a degree (mean=3.5) were found to be significantly more dissatisfied with the expatriates' interactions with co-workers than those with diplomas (mean=2.6). With respect to the rest of the constructs, none were found to significantly differ depending on the educational level of the respondents.

The one-way analysis of variance carried out in testing for position effect showed no significant differences with the exception of expatriates' interactions. In this case, the professionals are significantly dissatisfied (mean=3.7) with the expatriates' interactions with co-workers (F=4.9, p=0.0149).

Overall, the respondents were neutral on the issues of interactions of expatriates with coworkers, appreciation of expatriate services and the operation of the department as a learning organization. This is explained by the fact that the means for these variables were in the region of 3, which is the category of neutrality. Slightly below the neutrality score is the transfer of skills construct which talks about the existence of barriers and conduciveness of the skills transfer process. This construct had a mean of 2.33 which is more on the positive of neutrality. This means the respondents generally agreed that the transfer of skills took place and in a positive atmosphere. There is a stronger indication of agreement that promotion of organizational learning as a response to skills shortage would go a long way in meeting the human resource needs of the department.

It can be concluded that moulding departments into learning organizations is an acceptable approach to solving the problem of skills shortage. Based on the above outcomes, the use of expatriates is an issue that is viewed with a mixture of approval and disapproval. In this particular case, there was mixed reaction to their interactions and services. These opinions could be a result of issues other than the ones addressed in this research. As such, it would be recommended that research be carried out with the purpose of identifying reasons why expatriates' interactions and services are viewed in that way. At the same time, it would be necessary to identify the best way of implementing skills transfer programmes that would be acceptable to the employees within the department.

It was also found out that some of these perceptions are influenced by the educational level and position of the respondents. Particularly the issue of expatriate interactions with coworkers is a case in point. It was found that those with degrees and the professors were more disapproving compared to the other categories of respondents. It would be interesting to find out exactly what it is that those with higher education disagree with in terms of expatriates' interactions with coworkers. Probably, a study looking specifically at those with a higher level of education alone would yield some explanation of the state of affairs.

3.5   Discussion of findings

Eight (which represents 67%) of the respondents indicated that they learnt nothing technical from the Cubans. Only three respondents, which represents 25% of the respondents, acknowledged having learnt something (e.g. designing and photography, how to use the AutoCAD Programme and some technical skills), whilst one (which represents 8% of the respondents) was noncommittal; only indicating that there was minimal learning that took place with regards to technical skills, but not specifying the area of learning.

A similar trend emerged where seven (which represents 58%) of the respondents were negative about the Cubans' professionalism, whilst four (which represents 33%) acknowledged them as being professional to the extent that they could learn from their professionalism. Again, only one was noncommittal, saying he observed minimal professionalism, which he did not specify and this represents only 8% of the respondents.

The same responses to the above were advanced by the respondents in respect of the issue of work practices. The ratio is 7: 4: 1 for learning nothing from the Cubans, learning something and minimal learning, respectively. This translates into the same percentages of 58, 33 and 8 respectively.

As far as human relations are concerned, six respondents, who represent 50%, seem to have been positively disposed to the Cubans. They acknowledged the fact that the Cubans forged good human relations with their South African counterparts due to their friendly nature, notwithstanding the language barrier that alienated the two groups. Three of the respondents, who represent 25%, expressed a negative sentiment saying that there was nothing positive about the human relations involved, whilst the other three, who represent the other 25%, were neutral, attributing their neutrality to the fact that there was a communication problem which, in their view, restricted positive human relations between the two groups.

The respondents overwhelmingly chose 'technical skills' as the category that most represents scarce skills, with 'professional skills' coming a distant second. One respondent opted for 'work practices' and another opted to be non-committal by pointing out that all of them could be classified as a scarce skill depending on the context.

All the respondents, bar one, indicated that none of their skills were enhanced due to their interaction with the Cubans, which implies that the arrival of the Cubans with their much-vaunted engineering skills had no bearing on the skills levels of their co-workers.

Even considering the results of this question, there was general consensus that the Department's skills did not receive enhancement, as a result of the arrival of the Cubans. Only one respondent acknowledged that there was some skills-sharing between the Cubans and the technical people at regional level, although there is no apparent evidence to that effect. The respondent may have made the assumption that because the Cubans spent most of their time at the regional offices; some form of skills transfer could or might have happened.

This was a follow-up question to the preceding question that sought to understand how much of the Department's skills or knowledge were enhanced as a result of the influence of the Cubans. This particular question wanted to know which of the skills or knowledge that had been gained by the Department were considered to be scarce skills by the respondents. Precisely because of the fact that most respondents did not see any value added by the presence of the Cubans, they could not provide a definitive response to this question. Some acknowledged technical skills as the scarce skills, notwithstanding their negative perception of the role played by the Cubans.

Most of the respondents pointed out that communicating with the Cubans was virtually impossible because the aforementioned group could not express themselves in English. Language proved to be the major stumbling block at the core of all the challenges. One respondent indicated that communication was not a determining factor because he appreciated the fact that those he interacted with tried very hard to make themselves understood. One indicated that the Cubans were too shy; hence they kept to themselves and showed reluctance to mingle with others.

Pertaining to proficiency, the respondents were equally split between those who perceived the Cubans as being less proficient in their work compared to the South Africans, and those who took a neutral stance, expressing the view that due to a plethora of factors, ranging from different work standards or methodologies to lack of knowledge sharing, it was difficult to determine whether the Cubans were more proficient than their South African counterparts. Only one viewed them as more proficient than the South Africans, whilst one viewed them as equal or less proficient and another one viewed them as equal to the South Africans.

The question that relates to the Cubans' work ethic while working on projects compared to their South African counterparts elicited more positive responses than any other question from the respondents. In all, most respondents seemed to acknowledge the Cubans' high level of professionalism. The responses were that they were either the same level or higher than

their South African counterparts, or that there was no noteworthy difference between the two groups. There was only one outright negative response, where the respondent pointed out that the Cubans took their time when they were assigned tasks.

On the one hand, slightly more than half of the respondents indicated that the issue of trust was non-existent, owing to the fact that the Cubans could not communicate and because of their incompetence the South Africans could or did not have any confidence in them. On the other hand, slightly less than half of the respondents felt that there was a semblance of trust that was displayed between the two groups. However, one of the respondents indicated that the Cubans spoilt this mutual trust by sometimes behaving like quintessential tourists by being more interested in taking pictures rather than focusing on the task at hand.

There were varied but valid suggestions as to how this notion of knowledge transfer could have been handled differently. All the suggestions seemed to imply that the whole process did not produce the anticipated outcomes. The suggestions varied; some respondents said government should have targeted countries with similar designs and language to ours, others suggested that the Cubans should have received language training prior to their coming to South Africa and should have been allowed to stay longer in this country in order to familiarise themselves with the South African culture. Other valid points that were made were that the country should have either targeted retired professionals and enticed them to re-enter the workforce to mentor the youth, or invested the money used on importing these Cubans to train the youth, thus ensuring that the country is guaranteed to have qualified professionals in future.

To the question of whether there was any value for money that relates to the benefits that could have accrued to the government after having invested heavily in this exercise, the responses were overwhelmingly negative. There was only one respondent who felt that there were positive results from this venture. The other respondents expressed the view that this project was a complete waste of invaluable resources.

To the question that sought to find alternative methods to achieve transfer of skills, if the steps taken by government were perceived as ineffective or inadequate, there were mixed reactions. Most respondents suggested alternatives that are more inward-looking than outward-looking. In other words, they proposed solutions that are geared towards amelioration of the skills challenges within the country, rather than importing solutions from foreign countries that might prove to be ineffective. Eight respondents out of the targeted 12

suggested solutions that focused on taking stock of the pre-existing skills within the country and devising home-made solutions that are designed to improve them.

Suggestions ranged from targeting professionals and encouraging them to mentor the youth, to sending people to learn these skills abroad and having them come back to implement those skills in their communities, to doing a skills audit within the country before going out to look for the skills needed, to investing in the future by enticing the youth to acquire these needed skills, to suggestions of upgrading internal capacity of staff and broadening the horizon to incorporate the other Southern African Development Communities (SADC) countries as sources of needed skills.

Only two respondents saw the need to utilise the services of the Cubans. One suggested that they should have been taught our English first in order to facilitate effective communication, whilst another one suggested that the Cubans should have been afforded an opportunity to conduct formal training of the skills they possessed. One respondent suggested that if there is a need to import these scarce skills, we should rather approach countries with a culture and language similar to ours to circumvent challenges similar to those we have had to contend with in this case. Only one respondent did not suggest any alternative, only reinforcing the view that the Cubans' expertise was adequate in all respects and they were equal to the task at hand.

The majority of respondents perceived engineering, quantity surveying and architecture as the main skills that should be considered as scarce skills, with project management featuring in one of the respondents' list. This is not surprising, considering that all the respondents operate in the built environment where these skills are essential. Only two respondents were non-committal in choosing what they perceive as scarce skills. One respondent expressed the view that there aren't skills that could be construed to be scarce skills, precisely because we have an abundance of these skills in the country - what is needed is to recruit properly. Another respondent is of the view that any skill can be a scarce skill; it depends on what skills you have and which ones you do not have.

The perceived knowledge limitation has also been deduced from the responses to the two questionnaires distributed to the employees of the Department of Roads and Public Works. There were questions that sought to find out whether the respondents did learn anything from the Cubans or whether the organisation gained any knowledge as a result of the arrival of the Cubans to the organisation. A huge percentage of the responses were negative on both

accounts. First and foremost, Cuba has been identified as one of the leading countries as far as their high standard of education is concerned. The fact that a) South Africa has been sending scores of young people to that country to acquire medical, engineering and other skills and b) South Africa has been importing doctors and engineers to come and work in South Africa, especially in the far-flung areas such as the former homeland of Transkei where locals refuse to work because of the rural and poverty-stricken nature of these areas, bears testimony to the impeccable credentials of Cuba as a hub of high-quality education.

If this consideration is anything to go by, then the quality of the knowledge or education qualifications possessed by the Cubans should not have been a major consideration. Notwithstanding that, as a consequence of the fact that the Cubans found it difficult to integrate themselves and thus impart their knowledge, their qualifications were either perceived as being below expectations or non-existent. This fact therefore gave rise to the perception, rightly or wrongly, that they did not possess the skills or knowledge they purported to possess.

This perception was also reinforced by the Cubans' reluctance to socialise with their counterparts and their perceived indifference to the tasks assigned to them. For instance, one particular respondent, who happened to work very closely with them on certain pivotal projects, cited one incident where he and one of the Cubans were assigned a task that had a stringent deadline. He pointed out that, as a result of the outright indifference that was displayed by that particular Cuban, he ended up performing that task all by himself, being conscious of the fact that his own job would be on the line if they failed to adhere to those predetermined time-frames.

Chapter Four

Home-grown Initiatives for Learning and Skills Transfer

4.1   Introduction

At this stage of the research, the primary focus is on the structured, home-grown initiatives that are designed to come to grips with the notion of skills transfer, as opposed to the "politically enforced" process that we have just highlighted in the foregoing chapters. This approach meant to display other innovative but seemingly mundane methods of ensuring that the residual skills, however insufficient they may seem, should and could be enhanced to the ultimate benefit of the province and the entire country.

The Department of Roads and Public Works in the Eastern Cape has continuously tried to expand the pool of qualified artisans and professionals in the province utilising its equitable share of the budget for human resource development and from revenue contributed by the other programmes within the department, such as the Construction Industry Development Programme (CIDP) and Innovation and Empowerment Programme, both of which fall under the EPWP. A brief exposition of the Department's mandate will shed light on how crucial these initiatives of skills acquisition and transfer are.

4.2.   Programmes responsible for skills acquisition in the department

There are three crucial programmes that will receive special attention with regards to the discussions of skills acquisition, and these programmes are all located within EPWP. These programmes are the Accelerated Professionals Training and Competency Development Programme (APTCoD), the National Youth Service (NYS) and the Amathuba Jobs Portal.

Insight into these three programmes was elicited through interviews with the Senior Managers that are spearheading them.

4.2.1. The Accelerated Professionals and Trade Competency Development Programme (APTCoD)

Over the last number of years it has been observed that South Africa has an alarming shortage of artisans and professionals. Many programmes have been put in place across the country to address this shortage. The Accelerated Professional and Trade Competency Development initiative (APTCoD) is the Department's conscious response to the Accelerated Skills Growth Initiative of South Africa that was initiated by the national government to expedite the process of improving skills in the country. This strategy was initiated to address the shortage of skilled artisans in the built environment, as it was found that the quality of work in the provision of infrastructure was of a questionable standard. This programme allows newly qualified learners from FET schools, having passed the theory aspect of their education and specialised in one or more relevant construction industry trades, to be mentored by officials of the Department of Roads and Public Works on the work that is executed on site.

It is also worth mentioning that there is no carte guaranteed entry into the programme, because examination and certification plays a pivotal role in ensuring that this is a legitimate programme that is worth due recognition. There is a minimum qualification requirement for the aspiring participants to this programme. For admission one must have one of the following trades and qualifications: Brick Layers N2, Carpenters N2, Plumbers N2, Painters N2, Electrical N3, and Mechanical N3.

The development duration of this strategy is usually 18 months, and continuous assessment is conducted to determine the suitability or lack thereof of participants. A trades test is a qualification earned after examination by the Department of Labour. The learners have to undergo a rigorous process of periodic examination and certification at various stages of the training, after which they are expected to undergo a trades test as provided for by the Department of Labour (DoL).

The APTCoD programme was started in 2007 in the O.R. Tambo Region of the Department, which is based in the area of Mthatha in the former Transkei of the Eastern Cape, and is currently managed by the Construction Industry Development Programme within EPWP. It was launched by the then-MEC of the Department of Roads and Public Works Honourable Chris Martins at King Hintsa Further Education and Training (FET) College amidst much

fanfare. It was hailed as a long-term solution to the skills dearth in the province. To date, the programme recruits young people mainly from FET colleges, as it seeks to empower the youth (those between age 18 and 35), and the incumbents of the programme are trained in order to be well-equipped to qualify for N-level qualifications.

This is a three-year programme, meaning that it works in cycles. For instance, when the first learners completed their cycle in 2010, others were brought in to start a new cycle. The programme again took in learners in 2008 and 2009 to ensure that there was continuity in the programme and to maximise impact in terms of population reach. It often happens that some of the learners do not pass the trade test on the first attempt, and this means that they stay on in the programme until they pass; this has seen the number of learners in the programme increase from 300 in 2008 to 550 in 2012.

There are also professionals in the programme; these are those who have received bursaries from the department. Once they have obtained their degrees they are required to do compulsory work for the department for a period of three years, which is usually equivalent to the number of years they have been funded. During this period they are assisted to prepare for their board exams and furthermore to register with the professional bodies of their respective trade.

Since 2007, 550 learners have been enrolled into the programme and this is a contribution towards the alleviation of poverty. When the learners have completed the programme, they have the skills to enter the job market and also the ability to kick-start their own enterprises with these skills. What is of more significance is the fact that there are currently 277 learners that have passed the test through the Olifantsfontein Training Centre in their respective categories.

With respect to exit strategies, the learners are either absorbed as artisans into the Department or are encouraged to start their own companies and enter the business world. There is also a move by the CIDP to enforce a condition that stipulates that contractors that are awarded DRPW tenders are obliged to provide employment to the learners that have passed their trade tests on the respective projects these contractors have won tenders for. The move is to include this condition on all construction tenders that are awarded by the Department. Some of the learners that have passed the trade test have been gathered to form cooperatives and Small Specialist Contractors (SSCs). These cooperatives and SSCs are organised and assisted to gain work through subcontracting on larger contracts. Some will be labour - only sub-

contractors, meaning that they will sub-contract on individual basis and not necessarily as SSCs. The learners that start SSCs are further assisted in a contractor development programme; this teaches them how to fill in a tender document and how to do calculations for tenders.

This programme is operational in all six regions of the province, but it is championed by the Senior Manager of CIDP at Head Office in Bhisho. It is important to note that all the mentors in the programme are artisans from the departmental in-house teams and the department does not use mentors from external institutions. This is meant to ensure that there is a process of skills transfer between experienced qualified mentors who are in the department's payroll and the newly-qualified artisans who still require nurturing. The programme can be accessed through regional offices and is also operational at sub-regional level. Like the artisans, the professionals are also mentored by internal mentors of their respective fields.

One of the spinoffs of having qualified artisans and professionals within the ranks of the Department is that projects that are undertaken by the Department have since improved, meaning the programme is gradually reaping the rewards of its efforts. A further benefit of this programme to the Department is that as the artisans in the Department have aged and some retired, the programme has allowed for young people to take up the work that was in the hands of their mentors, meaning that there is continuity. In terms of poverty alleviation, a stipend of R2000 is given to the learners, meaning that over the last five years 550 learners have been given a stimulus to participate in the economy of the country and also have the ability to trade. There are now also 277 learners that have passed the trade test, meaning an escalation of the number of skilled individuals in the province.

The major challenge for the programme is that the only budget provided for covers the stipend to pay the learners. This means that logistical matters such as training, accommodation and transport are not catered for. The professionals, however, sign contracts and therefore their income is provided for in the compensation of employees' budget. Human resources are also very limited, meaning that there are not enough officials to look after this programme. This is how the programme is summarised by its practitioners:

1.   Graduates enter the fray from institutions of higher learning through programmes and they participate in maintenance and capital projects as per DRPW mandate.

2.   Interns are identified to form the "elite" teams together with mentors from in-house teams where specifically designed programmes are embarked upon to fortify

professional and trade competencies for the interns so as to enable them to exit the programme as registered professionals and trade diploma artisans. At this stage they can join existing businesses as employees and partners; some will opt for new business ventures (NBV) as Small Speciality Contractors (SSCs).

3. The newly-registered professionals and artisans who opt for new business ventures will be apportioned small-scale outsourced projects where the knowledge imparted is put into practice and tested at a semi-independent level. The training and support needed for these ventures to succeed will be made available to them.

4. Then they will be released to perform independently on construction and maintenance projects externally. At this stage the SCCs achieve absolute business autonomy.

5. Throughout the process, EPWP, CIDP and CIDB imperatives are observed and applied.

The fact that the learners of these trades are assigned mentors to teach them these skills is indicative of the fact that the Department is making an effort to ensure knowledge transfer and thus enhance the number of skilled personnel to be utilised for infrastructural projects.

4.2.2.   National youth service

This programme was initiated in 2009 by then-Minister of Public Works, Ms T. Didiza, to address unemployment and assist the youth that did not complete Grade 12 (and those that completed but could access tertiary education) by providing them with the opportunity to do practical work on government buildings and thus equipping them with skills.   The programme was launched by the then-political head of the DRPW.

The programme has trained over 1500 young people since 2009 in the following trades: bricklaying, carpentry, electrical, mechanics, painting, plumbing, roads construction and maintenance, welding and some were trained as data capturers for Amathuba Jobs Portal. With the inclusion of the Roads Infrastructure programme, the NYS had to diversify in order to accommodate the skills that are required in the construction and maintenance of roads.

The learners in this programme are placed according to skill sets. The road construction and maintenance learners are placed under the District Roads Engineer (DRE), in depots and with in-house construction teams. The learners doing mechanics are placed in departmental garages. Those under public works are placed in depots and in technical units of municipalities.

When the learners have completed the NYS programme, they are graduated to the APTCoD programme. There are instances where some of these individuals have moved directly to the job market, but this is rare, because the level of training at APTCoD is far higher than that of the NYS. The NYS only constitutes basic skill sets, as it is an 18-month programme that includes practical work and classroom work. APTCoD, on the other hand, is a three-year programme that is practical.

The NYS has provided individuals that were trained as data capturers for Amathuba Jobs Portal. When the NYS learners have completed the programme, they are then registered onto the Amathuba Jobs Portal. The programme allows the Department to have a pool of people to choose from that can do handy work in the department. This also allows the Department to minimise costs as there are people that can do minor tasks without the Department having to appoint external contractors.

The stipend of R1400 that is received by NYS learners is intended to assist the learners with transportation costs from their places of residence to where they have been placed to undertake their training. In as much as this is the intended use, it has however been noted that many of the learners use this stipend to support their families. The impact of the NYS on poverty alleviation was not expected to be direct, but because of the "misuse" of the stipend there has been some relief to poverty-stricken individuals. On 1 April 2013, the stipend was increased to R1450 according to the ministerial determination. There is a minimum and a maximum amount that is provided by the ministerial determination. The Department chooses to take the minimum as it allows for the contracting of more people and thus have a larger impact.

The major problem encountered by the NYS is that many of the learners are concerned only with earning the stipend and not necessarily acquiring the skills. This means that the programme has learners that are not committed to the programme, and the skills transfer is not occurring. This minimises the impact of the programme, and there are no effective controls with which to curb its occurrence.

This programme is also another attempt to grapple with the notion of knowledge transfer because it functions along the same lines as the APTCoD Programme explained above. This programme is a precursor to the one above, it actually prepares learners to be ready to cope with what they will be taught in the more advanced APTCoD Programme.

4.2.3.　　Amathuba jobs portal

Amathuba Jobs Portal is a web-based portal that was started in 2011 to address the challenge of unemployment and assist in the fight against poverty. This programme was brought about to create a link between projects (employment opportunities) and skills (unemployment). In other words, it is designed to provide a platform for assisting unemployed graduates, skilled and unskilled job seekers in the Eastern Cape. The programme registers unemployed individuals so that they may be accessible to project managers that are seeking relevant skills.

This programme was initiated during President Mbeki's term in office and was driven by Ms T. Didiza, and piloted in the Eastern Cape as the Umsebenzi Jobs Portal. The project was then relinquished at national level, and was taken further as an Eastern Cape project and was launched in the province by the MEC.

Amathuba Jobs Portal has seen over 40 000 people registered and nearly 10 000 matched with relevant jobs. In a slow-growing economy that suffers from high levels of unemployment, a 25% match is an impressive achievement. The programme aims to reach all the unemployed people in all municipalities, for this reason people have had briefing sessions in most municipalities in the province. In the six regions the regional offices host an Amathuba office, which is used to register individuals, but in addition to these there are three other sites in Maclear, Duncan Village in East London, Ngangelizwe in Mthatha and at Head Office in Bhisho.

The exit strategy for Amathuba Jobs Portal is the matching of skills to employment opportunities. This means that the programme has been adopted into the Eastern Cape Job Creation Strategy. However, the portal is experiencing ICT-related challenges, and due to lack of capacity in the department, the solution has been to appoint an external contractor to manage the system. Another challenge is that some elected municipal councillors see the portal as a threat to their existence and prestige among their electorate. The reason for this is that in the past councillors usually brought job opportunities to the people within their jurisdiction, and now Amathuba Jobs Portal is perceived to be cutting them of out of the system by going directly to the people.

The Amathuba Jobs Portal's objectives can be summarised as follows:

1.　　To create an interactive and comprehensive web-based portal of work seekers and work providers within the Eastern Cape

2.   To support EPWP by identifying unemployed people and matching them with work opportunities close to where they live

3.   To enable large manufacturers to locate potential sub-contractors

4.   To provide a facility for recruitment by employers in the Eastern Cape

5.   To create synergies with other programmes in the EPWP stable, including the NYS, APTCoD and Enterprise Contractor Development Programme (ECDP)[166]

Looking at this particular project there is no direct link between it and knowledge transfer, however the purpose of highlighting it is just to draw attention to the fact that it is one of the strides made by the Department to ensure that those with the requisite skills are matched with potential employers.

4.2.4.   Bursary scheme

Another notable home-grown initiative that was designed to stimulate skills acquisition in the Province in general, focusing on the internal capacity in the DRPW in particular, is the notion of awarding bursaries to potential professionals, with the view of hiring them once they become qualified in their respective fields of expertise. This grassroots development has contributed immensely to the acquisition of scarce skills in the province in the recent past. For instance, in the financial year 2011/12 there were 115 bursaries awarded, out of which 15 were subsequently absorbed in-house as contract workers to augment the skills pool of the Department. From the remaining 100 bursaries, an additional 50 were awarded for the financial year 2012/13, to bring the total number of bursaries awarded to 150. These bursaries are for the following categories of professions:

Professional Studies	Males	Females	Total
Architectural studies	12	8	20
Building Management	4	9	13
Building Science	2	2	4
Civil Engineering	26	18	44
Construction Management	8	8	16

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[166] EPWP Magazine of the Eastern Cape DRPW, Issue 2; 2012

Electrical Engineering	6	5	11
Environmental Science	0	2	2
Industrial Engineering	1	0	1
Mechanical Engineering	20	9	29
Property Management	2	4	6
Quantity Surveying	2	2	4
TOTAL	83	67	150

Table 4.1 Categories of Bursaries: Source - Human Resource Development of the Department of Roads and Public Works

The 15 qualified professionals who were absorbed into the Department were from these categories: one building management, one surveyor, three quantity surveyors, five civil engineers, two mechanical engineers, one electrical engineer and two construction managers.

Furthermore, there is a huge budget that has always been allocated to roads construction and, consequently, the amount allocated to skills development has also increased. Two pertinent issues that have emerged are, first of all, that the roads component has put a premium on the allocation of bursaries to prospective engineering students to lure them to join the Department after completion of their studies. As a result, on average, they allocate 120 bursaries annually and they have to provide space for the intake of these graduates when they complete their studies. Secondly, they have also established three Centres of Excellence within the Province that foster mentorship of young graduates so that they can learn and gain practical experience in these fields from the experts.

These efforts are an attempt to address the enormous skills deficit experienced by the country in general and by the Eastern Cape in particular, although they are a meagre contribution considering the gravity of the situation. The bursary scheme, in particular, serves the purpose of ensuring that more high school learners opt for these scarce skills so that when they finish their studies the Department could put them under the mentorship programme where they would be able to learn from more experienced professionals thus ensuring that knowledge transfer takes place.

4.3. Other viable propositions for knowledge transfer

What other options could be explored to ensure that there is a continuous inundation of highly qualified and significantly skilled professionals in the requisite skills to guarantee sustained economic growth and enhanced services to the poverty-stricken for posterity? The most thought-provoking suggestion that has been advanced by some members of the Department, particularly the Human Resources Development practitioners, is for the Department to target nearby schools and reinforces mathematics and science studies among the learners and, with the enticement of bursaries, propel them towards pursuing studies in the built environment. This sentiment was also expressed by Ntanti and Haines in a paper presented in an Eastern Cape workshop where they argued that "[a] radical overhaul of the current school system is needed, since it was felt that it was perpetuating under-development in South Africa. Despite levels of state funding that exceed considerably equivalent spending rates in the remainder of Africa; our educational system at school level was not competitive overall with other African countries, particularly in maths and science education. While certain of the delegates disagreed, pointing out that their disadvantaged education had not held them back in their personal lives, it was noted that international evidence was compelling, and there had to be a political will to improve the current situation, as the under-educated products of the system contributed to the pervasive lack of skills in the workforce".[167]

In that particular workshop the attendees suggested other salient means of ensuring that the required numbers of skilled artisans and professionals are attained through:

1. Ensuring the encouragement of rural learners to undertake maths and science pathways at school,

2. Re-focusing on artisans within the province,

3. With the retirement of engineers to the detriment of public and private sector services and activities, there was a need to devise policy to ensure the importation of such skilled persons in the short-term while reorienting training priorities to build up local capacity,

4. Rather than seeing the youth in the 15-24 year age bracket as unemployed, the onus should be on the state (national and provincial) to ensure that they were accommodated

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[167] Ntanti & Haynes 2011: 93

in skills-enhancing programmes at schools, as well as on courses on a continuing education basis within post-school and private sector training facilities[168].

On the same subject of recruiting children from a young age, Gumede[169] has the following to say: "Would it not make more sense to recruit people young or even better, to identify talent at school level, fund their studies and thereafter train them through the business chain? Beneficiaries of such a recruitment method are likely to exhibit far more loyalty than workers who are simply plucked from another company."[170]

It would seem, therefore, that the Eastern Cape's efforts of providing school children with bursaries post-matric to take up studies in the built environment are a step in the right direction. However, those efforts need to be complemented by equally vigorous recruitment drives targeting learners during high school studies even before they reach matric to inspire those identified learners towards the same built environment trajectory. These bursaries of course, are, and, if they are not, ought to be accompanied by a stipulation that requires these learners to come and implement their skills in the same Department that has afforded them the opportunity to acquire those skills in the first place. A disconcerting question to ask would be 'Are these learners guaranteed employment within the Department after their qualifications?' This question emanates from recent studies that have shown that many young graduates with qualifications from various tertiary institutions are currently roaming the streets without prospects of employment.[171]

It is noteworthy that the residual home-grown and structured initiatives of the Department that are meant to nurture and ultimately grow a pool of skilled personnel are paying better dividends than the 'enforced' or 'imposed' initiatives such as the one in this case study of the Eastern Cape DRPW. The grassroots development of skills organically within the said Department has found resonance vis-à-vis organisational learning as opposed to the one parachuted from above.

An ideal approach to the acquisition of essential skills in the context of the Eastern Cape would most certainly be those initiatives that the people of the Eastern Cape themselves start.

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[168] Ntanti & Haynes 2011: 94

[169] Gumede 2012: 207

[170] Gumede 2012: 207

[171] Saturday Dispatch, 25 May 2013

Those initiatives would have to be nurtured from school level, where the curriculum would be structured such that school children are recruited early to select mathematics and science, with the view to channelling their careers towards science-related fields. However, if the World Economic Forum's recently released Global Competitive Report[172] is anything to go by, then the country in general and the Province in particular has their work cut out for them with regards to inculcating a culture of teaching and learning. To cite just one example from that report, South Africa is ranked last (that is, number 148) out of 148 countries surveyed in the area of mathematics and science. This is an indictment on South Africa, especially considering the fact that the country is ranked far worse that countries which have far less Gross Domestic Product (GDP) such as Malawi, Lesotho and Zimbabwe, to name just a few.

This gaping knowledge deficit that requires a gargantuan effort to surmount in order to recover lost ground is largely due to decades of neglect and economic deprivation of poverty-stricken provinces like the Eastern Cape, with all the economic activity being confined to the more affluent provinces such as Gauteng and the Western Cape. This is reminiscent of the 'centre versus the periphery' dichotomy espoused by the pre-eminent Indian economist Amartya Sen.[173]

There is still a long way to go before an ideal situation is reached and the road is littered with unforeseen challenges, but if organisations see organisational learning as the route towards the attainment of success and not just a product of chance, then the journey and all its pitfalls will be well worth the effort.

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[172] Global Competitive Report 2013 - 2014

[173] A Sen 1999

Chapter 5

Knowledge Transfer in a Developing Context

5.1.   A recap of definitions

The definitions of key concepts found in chapter two (concepts such as 'learning', 'organisational learning', 'knowledge' and 'knowledge transfer') laid a solid platform for the interpretation of the findings in this particular chapter. Starting with the definition of "learning", the underpinning feature of this notion that is clearly discernible from the earlier discussion is that learning is *a process that exhibits change in behaviour.*[174] This is the definition that was adopted for this study, among a plethora of other definitions. It therefore remains to be seen whether this change in behaviour is to be found in the empirical research conducted in this case study, which would attest to the assertion that learning has indeed taken place in the organisation under review.

The notion of 'organisational learning' has been aptly perceived by some scholars as *manifesting itself as creation, retention and the transfer of knowledge within and from external sources.*[175] If learning is said to exhibit a change in behaviour in individuals and organisational learning involves the above-mentioned processes, it can be inferred, therefore, that once the creation, retention and transfer of knowledge has indeed taken place there is bound to be a substantial amount of change that will be recognisable within the context of the organisation if the learning process has been implemented successfully. What then needs to be seen in this research is the extent to which this change or transformation has been

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[174] Maier et al 2001, Mills 2006, Gibson et al 2003

[175] Rick, Weber & Camerer 2007

observed by the respondents of the Department in the case study and whether they can indeed attest to it.

The definition of the concept of 'knowledge' that resonates with this study is the one that views knowledge as *the capacity to act*[176] or as the capacity for action and decision-making[177]. This definition conjures an image that is not dissimilar to the one of learning illustrated above, where learning is perceived as a phenomenon that results in the change in behaviour. Just as learning and knowledge are related to each other, with the former being the process and the latter being the result or end product, the capacity to act is also similarly related to change in behaviour, essentially, they seem to be two sides of the same coin. What remains to be seen here is whether the case study has revealed enough evidence of this capacity to act or decision-making as a result of the influence or impact of the outside knowledge bearers within the receiving organisation.

The last of these definitions that has received extensive attention in the foregoing chapters is the notion of 'knowledge transfer'. In view of the fact that this research is primarily designed to pay particular attention to the concept of 'knowledge transfer' and how it manifests itself, it is no coincidence that the entirety of this chapter is devoted to the efficacy of its application in organisations generally, but in public institutions in particular. The derived definition of "knowledge transfer" that has been adopted in this research is the one that perceives knowledge transfer as *a process of moving useful knowledge from one individual to the other,* which results in the organisation's performance being enhanced.[178]

To summarise, one could combine the four concepts and formulate one intricate definition that clearly delineates their inter-relationship and that also proves unequivocally that they are inextricably interlinked. The lengthy definition would indicate that learning causes a change in behaviour because the individual has acquired knowledge, which enables him or her to act or make decisions, whilst the organisation learns by acquiring knowledge through its creation, retention and transfer from inside and outside sources; as a result of knowledge transfer, which occurs by moving useful knowledge from one individual to the other, the organisation's performance ultimately benefits. In a nutshell, what this boils down to is the

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[176] Stehr 1996

[177] Davenport & Prusak 2000, DBSA 2003

[178] Ladd & Ward 2002

ultimate objective of enhancing the performance of the organisation through the impact of these processes.

In view of the fact that we are living in a boundless global village, it is common knowledge that the above attributes of individuals and, in turn, organisations are designed to keep abreast of 21ˢᵗ century developments, without which organisations would operate outside the realms of the digital world and thus lose their competitive advantage. Furthermore, what can be distilled from the foregoing discussions on the definitions of the concepts of 'learning', 'organisational learning', 'knowledge' and 'knowledge transfer' is that these concepts are the hallmarks of a knowledge-based organisation that endeavours to contribute to the knowledge economy of its country. The knowledge economy is the knowledge assets that enable a country's economy to grow exponentially. To put it differently, a knowledge economy country's economic growth fares much better than that of a country that does not focus on the knowledge economy.[179]

5.2.   Lessons learnt from the case study

What deductions could be made from the Eastern Cape DRPW with regards to being an organisation that initiates and nurtures knowledge transfer and displays the qualities of a learning organisation?

It can be deduced that moulding departments into learning organisations is an acceptable approach to solving the problem of skills shortage. Based on the above outcomes, the use of expatriates is an issue that is viewed with equal measures of approval and disapproval. In this particular case, there was mixed reaction to the expatriates' interactions and services.

It was also found out that some of these perceptions are influenced by the educational levels and positions of the respondents. One particular issue that is of major concern is that of the expatriates' interactions or lack thereof with their hosting co-workers. It was found that those with degrees and the professionals were more disapproving compared to the other categories of respondents.

5.3   Barriers to knowledge transfer derived from theory
5.3.1 Context

At this point in the research it is appropriate to examine the factors that have been advanced as barriers to knowledge transfer in chapter two and juxtapose them against what we have

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[179] The World Bank, 2007

gleaned in the findings of the research under review to determine the extent to which these barriers are discernible in the Department under review. The first of these factors relates to context, which refers to a highly regulated environment and international workforce. According to Fei et al.,[180] context is crucial in determining the extent to which knowledge is shared in any organisation. This is ascribed to various factors ranging from the dominant culture of that organisation, to the different languages spoken by individual members that inhibit knowledge sharing. The latter has been identified as the major stumbling block of knowledge sharing and transfer. Failure to communicate in the language spoken or to comprehend what is being communicated in a particular environment is a huge obstacle that hampers knowledge sharing to such an extent that those who speak a common language tend to disassociate themselves from the rest of the group. This exacerbates the tension by alienating those with whom they are supposed to share their knowledge.

None of the questions posed to the respondents in both sets of interviews revealed how highly-regulated the environment is or how diverse the workforce is. By virtue of being a highly-structured civil service characterised by a bureaucratic setting is symptomatic of a highly regulated environment. It is common knowledge that government institutions are by their very nature vertically-structured entities with rigid compartmentalisation,[181] which tends to stifle creativity and thus repel young, energetic people who wish to stimulate innovation in that institution.

5.3.2 Organisation

The second of these barriers relates to organisation, particularly the remoteness of management and workforce, and low organisational commitment. With regards to organisation Fei et al,[182] express the view that the nature of a particular organisation is either a catalyst or a deterrent to knowledge transfer. The notion of individualism that is inspired by the creation of a hierarchical structure of an organisation, where the bulk of the staff is found at the lower echelons of the pecking order and where top management is insulated in their elitist stations, is counterproductive to knowledge transfer. This situation is then made even worse by the spatial separation of personnel in their respective cubicles or office spaces.

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[180] Fei et al. 2010: 331

[181] Cong & Pandya 2003: 30

[182] Fei et al. 2010: 331

The same argument that is expressed above regarding the bureaucratic nature of government institutions is also applicable here. Bureaucratic institutions tend to alienate management and the lower echelons of the organisation. The chasm that exists between the two spheres becomes a barrier that portrays management as frightening monsters that are not to be trifled with; this usually results in people occupying the lower rungs of the organisation treading nervously even when there is a need to seek knowledge for work-related processes and procedures.

5.3.3 Relationships

The third of these barriers pertains to relationships, which includes linguistic barriers, different cultural backgrounds, temporal relationship due to high mobility, strict hierarchy and low trust. According to Fei et al.,[183] relationships could be skewed to divide co-workers and create a chasm that cannot be bridged. Furthermore, it is a fact that where there are restrictions in terms of personnel movement, knowledge sharing and transfer are non-existent. In bureaucratic systems, where there is a rigidly established hierarchy and where staff are separated according to their ranks and are assigned specific individual tasks and allocated single, enclosed offices or working spaces to operate from, there is no diffusion of knowledge among co-workers. Without social interaction, whether formal or informal, 'silo' mentality becomes deeply entrenched and knowledge transfer becomes a casualty.

These barriers have been apparent in the case study under review. Almost all the respondents cited linguistic barriers and differing cultural backgrounds as the more prominent causes of estrangement between the two groups of workers. Language differences are a huge disincentive to knowledge sharing and transfer. It has been acknowledged that it is difficult for people to share information if they speak the different languages. Davenport and Prusak have argued that "[r]esearch has shown time and again that a shared language is essential to productive knowledge transfer. Without it, individuals will neither understand nor trust one another. Brought together they will clash or simply not connect."[184] It is evident that the element of trust is prevalent amongst people who share the same language.

The research undertaken found that the challenges confronting the Eastern Cape DRPW that impeded the effective transfer of knowledge to the employees of the Department and also impacted on organisational learning in general hinge on these critical areas, especially that of

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[183]Fei et al. 2010: 331

[184] Davenport & Prusak 2000: 98

culture and the perceived knowledge limitation. Culture, in this context, is used broadly to encompass language, food, social life and values; and is also used to mean 'the way things are done here' in an organisation. Although language constitutes a significant component of culture, it should be analysed in isolation, precisely because of the fact that it has been identified by the respondents as the vital element that hampered proper interaction between the Cubans and their South African counterparts.

The subject of language as a barrier that circumscribed tangible transfer of knowledge is a factor that has been acknowledged by the respondents in both surveys as a tremendous contributing factor. Most respondents cited the fact that the Cubans kept to themselves in their offices without making any effort to integrate themselves and learn to speak the language that is spoken by their hosts, with the view to in turn transfer their language, as the main stumbling block that created the wide rift that existed between the two groups. It was also mentioned that rather than intermingle with their South African hosts they would sometimes behave like tourists and they would be seen taking pictures rather than doing the actual task at hand like their counterparts.

The first round of findings proved beyond any reasonable doubt that language constitutes the single most important barrier, in view of the fact that during that round 71% of the respondents cited it as such, with only 20% disagreeing with that assertion. Even during the second round, targeted respondents on the one hand agreed that there was a good relationship between them and the Cubans; whilst on the other hand they still felt that language differences posed a serious challenge. In the second round of face-to-face interviews, 50% of the respondents conceded that the expatriates were friendly and interacted with them, despite the communication problem caused by the language issue. 50% expressed a different view. These challenges were highlighted in chapter two where Easterby-Smith and Blackman[185] cited lack of shared language, values, knowledge and understanding as the critical factors that impede effective knowledge transfer.

In addition to this, due to the fact that not one of the employees of the hosting organisation was familiar with their culture nor was there anybody who has ever been to their country of origin, the respondents indicated that they expected the powers-that-be of the organisation or even the Cubans themselves to facilitate the latter's assimilation. The expectation was that the Cubans would adjust to the culture of their hosts for the duration of their stay to assist the

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[185] Easterby-Smith 1998 & Blackman 2006

process of assimilation to run its full course. Politicians and, by extension, Senior Managers who were responsible for bringing the Cubans to South Africa in the first place, put the Cubans in an invidious situation by simply assuming that socialisation would occur spontaneously, without any instigation on their part.

In the interviews, what became abundantly clear is that the professionals or those in the higher echelons of the Department were more dissatisfied with their interactions with the expatriates than those in the lower echelons. Those in the upper echelons were supposed to be the main group the expatriates would have been interacted with as their peers, but it seems the opposite is true.

Temporal relationship due to mobility could be a factor that contributed to the two sides not being cordial or interacting as they should have; however, there is no empirical evidence to that effect. There were even suggestions from the respondents that perhaps the expatriates should have been allocated a longer period of residence in the country in order to familiarise themselves with the culture of the locals. This seems to be a simplification of this conundrum in that there are no guarantees that they would have assimilated into the culture of the country even if they had been given more years.

The last of these variables relates to low trust as a potential barrier to knowledge transfer in organisations. In this regard, there is evidence aplenty to suggest that trust was conspicuously absent between the locals and the expatriates. The interviews revealed that indeed there was minimal or no trust between the two groups. This was again attributed to the challenge of there being no proper communication and, secondly, the expatriates' perceived incompetence resulted in the locals not having any trust in them.[186] To conclude the discussion of trust, Davenport and Prusak, who are cited extensively in chapter two, have the following to say about trust or the lack thereof: "Trust can trump other factors that positively affect the efficiency of knowledge markets. Without trust, knowledge initiatives will fail, regardless of how thoroughly they are supported by technology and rhetoric and even if the survival of the organisation depends on effective knowledge transfer."[187] In a nutshell, without trust any attempts to ensure that knowledge is transferred from those who are purported to possess it to those who need it would be futile.

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[186] Davenport & Prusak 2000: 34

[187] Davenport & Prusak 2000: 96

5.3.4 Individualism

The fourth of these barriers is termed "individual", which relates to lack of willingness to share and low motivation to learn due to low trust, low commitment to the organisation and lack of motivation to learn due to the temporality of the career. Pertaining to the issue of individuals, this, according to Fei et al.,[188] relates to the notion of staff turnover that characterises many an organisation. Workers are no longer as loyal to their organisations as their historical counterparts used to be. In most instances, the youth perceive their immediate work environment as a stepping stone to a more lucrative job. Management would recruit, induct, train and mentor these youth hoping for returns on their investment for the organisation, only for the said youth to resign in favour of 'greener pastures'. This becomes a barrier to knowledge transfer, considering the constant recruitment, induction, training and mentoring cycle the organisation has to go through.

The sense of individualism is perceptible in government departments where competition is not encouraged and no major incentives are forthcoming to foster teamwork. Again, lack of trust is a variable of individualism. Suffice it to say that much has been said about low trust in the foregoing discussion. In the interviews of the case study there were no explicit questions that were designed to elicit a response pointing to individualism in the organisation.

5.3.5 Knowledge

The fifth of these barriers relates to knowledge, which is explained as 'highly experiential' versus 'written rules and instructions'. In terms of knowledge, Fei et al.[189] refer to the type of knowledge at the worker's disposal. Some of the knowledge that workers need to execute their tasks requires them to observe and learn from experts in order to acquire the requisite expertise that is embodied in those experts. In some cases, the knowledge is embedded in manuals, conventions, processes, procedures, frameworks, guidelines, rules and regulations, which the incumbent needs to familiarise him/herself with to be able to execute his/her functions effectively. Thus, the nature or type of the knowledge available for transfer might not necessarily be suitable for a particular individual at any given time or might not even be available when it is urgently required.

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[188] Fei et al. 2010: 331

[189] Fei et al. 2010: 331

5.3.6 Mechanisms

The last barrier relates to mechanisms, namely apprenticeship versus cadetship and formal versus informal networking. According to Fei et al., [190]these refer to the actual modalities through which knowledge is transferred. For instance, "apprenticeships", "learnerships" or "internships", as these are called in South African parlance, are types of mechanisms through which the youth puts into practice the theory they have accumulated over their years of tertiary education. These forms are an attempt to bridge the gap that exists between what they think they know and what exists in reality. Other mechanisms that are indispensable for knowledge acquisition are job rotation, which helps to acquaint the new recruits with various types of work processes or procedures, and the on-the-job training to entrance the practical skills of the incumbents. Both of these mechanisms are catalysts that instil a culture of learning and build self-esteem, which, in turn, encourages the workers to transfer their newly acquired knowledge. Without these mechanisms, the organisation becomes stagnant and knowledge transfer dies an ignominious death.

Without resorting to conjecture, there is no empirical evidence in this case study to attest to either of these diametrically opposed notions being a serious challenge.

5.4   Knowledge transfer practices derived from theory

Effective knowledge transfer practices, as espoused by Fei et al.[191] in chapter two, are organisational culture, organisational leadership and technology. These practices could potentially lead to the elimination of the organisational knowledge barriers. These practices are designed to entrench knowledge transfer and enable it to prosper exponentially.

5.4.1 Organisational culture

Organisational culture has been dealt with extensively in the foregoing discussion, which deals with the barriers to effective knowledge transfer. Organisational culture is said to be the single most debilitating factor that thwarts efforts to transfer knowledge. However, if the culture is a relaxed and informal environment where knowledge-sharing sessions take various forms and are encouraged by management, then knowledge transfer is likely to materialise. Again, Davenport and Prusak's suggestions come to mind, with regards to the organisational culture that should be adopted for effective knowledge transfer to happen. They maintain that

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[190] Fei et al. 2010: 331

[191] Fei et al. 2010: 331

the most effective way to transfer knowledge is to hire smart people and allow them to talk to other people. Often what happens, they argue, is that "[o]rganisations hire bright people and then isolate them or burden them with tasks that leave no time for conversation."[192] This is precisely what the case study has shown: the expatriates were allocated their own office, where they were left to their own devices. It was only on a few occasions that they were co-assigned to tasks with the locals, in which case they would display indifference to the task at hand.

5.4.2 Organisational leadership

The second key enabler that has been cited by Fei et al. [193]is that of organisational leadership. This aspect cannot be overemphasised enough, because without it all other attempts by the junior personnel would be subdued, if the organisation's management does not display its leadership acumen to enable knowledge transfer practices to develop. The role of leadership has been aptly articulated by Serrat of the Asian Development Bank and is cited in chapter two as follows: "The leadership of a learning organisation is committed to the importance of learning and clearly communicates that learning is critical to organisational success. The leadership recognises the importance of providing the motive, means, and opportunity for learning: (i) the motive being the "why?" – the purpose and reason for learning; (ii) the means being the "how and what?" – the models, methods and competencies required, and (iii) the opportunity being the "where and when?" – the spaces for learning. Leaders take an exemplary leading role in creating and sustaining a supportive learning culture."[194]

As pointed out on the previous pages, the Senior Management of the Department under review can be accused of abdicating their responsibility of creating an environment that is conducive for the expatriates to work and transfer their knowledge without hindrance. They simply assumed that the absorption process would unfold without their intervention and the expatriates would simply be assimilated into the organisational culture.

5.4.3 Technology

Lastly, and of equal importance, is the role of technology. This view has been expressed by various scholars that have been cited in this study, to amplify the significant role that technology plays in effective knowledge transfer. For instance, Davenport and Prusak claim

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[192] Davenport & Prusak 2000: 88

[193] Fei et al. 2010: 331

[194] Asian Development Bank: 5

that "[e]xtensive knowledge transfer could not happen in large global companies without the tools provided by information technology."[195] At the same time, Cong and Pandya express a similar view thusly: "Knowledge Management is an ability of an organisation to use its collective knowledge through a process of knowledge generation, sharing and exploitation enabled by technology to achieve its objectives."[196] The third of the cited scholars, Filstad, also vouches for the utility value of technology as follows: "Learning organisations know how to harness the power of information technologies – without these technologies constraining knowledge management and learning."[197] People, processes and technology have been touted as the three key variables to ensure attainment of the goal of a learning organisation.

5.5 The findings in light of theory

5.5.1 What is the case study telling us?

The case study is a classic case of providing wrong solutions to an intractable challenge, which all concerned concur has confounded the country and requires perceptible tenacity to overcome. The foregoing theory clearly states that there are barriers that need to be dispensed with first in order for knowledge transfer to thrive. The findings illustrate that the crux of the problem revolves around two critical issues namely; culture, inclusive of language, and the environment, which refers to how the expatriates were brought into the country, how they were introduced to the Department, how they were integrated to the complex fabric of the organisation and lastly, the space they occupied. The last aspect of space refers to office space, where the expatriates were made to occupy one office all by themselves, leaving them to their own devices.

Issues of culture, language in particular, could pose a serious hindrance to any attempts to foster knowledge transfer. What the case study illustrates unequivocally, in this regard, is that the vexing issue of culture as an impediment was not anticipated and no visible steps were taken to ensure that there is smooth assimilation of the expatriates into the milieu they were not familiar with.

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[195] Davenport & Prusak 2000: 96

[196] Cong & Pandya 2003: 27

[197] Filstad 2007: 7

The fact that they could not communicate and did not socialise with their co-workers, as a consequence of language deficiency, is a factor that ruined the relationship between the two groups beyond repair. It exacerbated the already strained relations caused by their non-familiarity with their surroundings. The issue of surroundings or environment that was clearly not as welcoming as it should have been is abundantly clear in the findings. The theory clearly states that Senior Management should play a pivotal role in ensuring that the environment is conducive to knowledge transfer. However, the findings clearly indicate that the contrary is what actually took place. Senior Management of the Department made an incorrect assumption that the situation would sort itself out, without their active participation to ensure that it does.

If the findings of the case study are anything to go by, it would seem that there is a plethora of barriers to knowledge transfer, which curtail any efforts to ensure that the organisation gravitates towards being a learning organisation. It became abundantly clear in the findings that most of the barriers that have been identified by scholars as stifling knowledge transfer have proliferated into the organisation in the case study that the process became an exercise in futility, which did not add any value for money.

5.5.2 Recommendations - What should have happened to foster knowledge transfer?

Alternative suggestions that were brought forward by the respondents seem to mirror the scholars' sentiments expressed in the preceding chapters. For instance, there are suggestions that government should recruit from within the country, by investing primarily in the youth. This sentiment resonates with what Gumede[198] and other scholars have suggested that government should identify kids from an early age and ensure that they take up subjects such as mathematics and physical science. This would ensure that posterity of the country is better prepared to take up challenges in the science domain.

Before undertaking a project of this nature and proportion, it is incumbent on those spearheading it to ensure that thorough preparations are conducted in order to lay a proper foundation that will yield the required positive results. Such preparations should involve the clients, namely, the receiving government departments and the supplier of the requisite skills, the Cuban government, in this particular instance. The end product would thus be predetermined by the kind of preparations that were undertaken. The following questions

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[198] Gumede 2012: 203

should have been asked upfront and the responses would indicate the course of action to be followed.

1. Have the needs of the receiving departments been identified upfront? Yes or no? If the answer is no, then there is a need to clearly identify the type of skills that are profoundly needed. To answer this question, more questions need to be asked, for instance, how much of these skills are needed? How soon are they needed? Where are they needed most? What standards are required and at what cost to the state?

2. In other words, was a skills audit done to determine the skills gap and also decide on those skills that are needed but not so urgently?

3. Secondly, the communication channels are crucial. For instance, who was communicated with regards to the needed skills? Did the government get the necessary buy-in from the people who would be working with the Cubans? Was the issue of culture properly addressed with the Cubans and the receiving departments? Was there a feedback loop that was created for the Cubans to measure their performance and thus determine the efficacy of this exercise?

4. Most importantly, how would the critical question of skills transfer be addressed, once the Cubans arrive and start working? What could be done to address the issue of the language barrier to ensure that there was going to be a smooth process of skills transfer from the knowledge-holders to the potential recipients?

5. How would the state ensure a return on its investment? How would this return be measured?

6. What about the induction of the Cubans? Were they familiarised with their business context to ensure a seamless transition to their new environments? Were their critical challenges identified beforehand and adequately addressed? Were the key projects they would be involved in identified beforehand and was sufficient groundwork done to prepare for their arrival?

When analysing what actually happened, one needs to look at the environment to decipher the enablers and the disablers that could have had a bearing on the transfer of skills. Before that, one needs to look at what were the expected results, what actually happened and what was the gap between what was anticipated and what actually happened. The gap between those two aspects would provide the lessons that could be derived from this study. There is a

wide range of disablers one could have anticipated in this type of exercise. These would range from the language barrier, the cultural differences, the preparation of the receiving department, the induction context, the issue of there being no clearly defined feedback, the perceptions of costs among the receiving people, perceived negative attitudes on both the Cubans and the receiving departments' parts and the wrong type of skills (in other words, receiving the type of skills that are in abundance in the country, as opposed to those that are in shortage).

5.6   Conclusions and further study

What has become abundantly clear is that organisations need to take up the challenge posed by the knowledge economy. Without learning and, by implication, organisational learning, organisations are doomed to fail in the performance stakes and their future is bleak. There should be no complacency, because not doing something tangible can only render an organisation impotent in its quest to supplant its seemingly daunting challenges. With perceived widespread corruption within government, coupled with alarming ineptitude in many areas, which inevitably result in negative audit findings, knowledge can only enhance organisational performance if utilised optimally. In this regard, organisational learning, including knowledge transfer, becomes of paramount importance.

Against that background, it is imperative that, in order for it to address the complex challenges posed by the non-availability of requisite skills, government needs to explore other viable options to the one of relying on the importation of professionals from other countries such as Cuba. This option should remain open, so that the country can benefit from the bilateral relations between the two countries. However, this option needs to be improved to ensure that all the rough edges that circumvent the smooth transfer of skills could be ironed out to facilitate a mutually beneficial relationship for posterity.

Other options that could be explored include concentration on the influx of young people from high schools and tertiary institutions who have no practical experience and some of whom have no hope of ever securing a job unless government rescues them from their quagmire. For instance, every year government departments, including the DRPW, allocate a certain percentage out of their fiscus for bursaries to young people. However, what is distressing is the fact that once these young people come back with these qualifications, two things usually happen: firstly, if they are employed by these Departments as interns, immediately after their internship they are let go without being offered a permanent position,

with the Departments preferring to acquire qualified and experienced professionals. These young people usually find themselves unemployed, with qualifications they are not given an opportunity to utilise.

The second scenario that may play itself out is that these young people, in anticipation of not getting the jobs they are qualified for, go straight into the private sector, causing the government to lose out on their investment. Because of the short nature of the internship contracts they are usually offered by government departments, these youth become unstable and look for 'greener pastures' in the form of permanent employment, because they know that there is no guarantee of permanent employment at the Department that has given them bursaries to further their studies.

Another vexing issue that needs to be taken cognisance of is the issue of the general assistants who have been working for government and particularly the DRPW for a number of years without having qualifications of any sort. All the depots of the Department have these general assistants in abundance who possess some tacit knowledge of the skills they have been exposed to over the years, and the experience they have thus accumulated needs to be put into good use. These people are mostly underutilised, precisely because their remuneration does not provide any incentive for them to utilise the knowledge they have accumulated. They just go through the motions, mainly doing the bare minimum, knowing that they are not valued by the institution they have spent most of their life working for. What they do is take part-time jobs after work and during weekends to eke out a living in an attempt to supplement the income they are getting from the government.

It is only when the qualified but inexperienced youth are contracted that these elderly unqualified workers' value is recognised. They are usually assigned these 'learners' to teach them how to do their jobs and are expected to transfer their tacit knowledge for which they are neither recognised nor remunerated because they do not have the 'proper' paper qualifications. There is a need to re-skill these people to enable them to attain the essential paper qualifications so as to proliferate the skills pool of the respective institutions.

The main components or divisions within government departments that are supposed to take up the challenge and provide the necessary training and purchase the required material for the training, usually don't realise the profound gains that would be derived from this undertaking. If this venture could be pursued with zeal and investment the importation of skills from far-

flung countries such as Cuba may not necessarily be the only solution to the country's myriad of challenges relating to scarce skills and knowledge transfer.

The DRPW in the Eastern Cape is making inroads in the alleviation of poverty. Not only is the department a premium employer, but its skills development programmes (that have received extensive coverage in chapter four) are also having a positive impact on job creation. Notwithstanding those commendable efforts, there are still intractable challenges that are faced by these programmes which hamper a full-blown strategy of skills acquisition.

The concept of 'knowledge transfer' should receive close scrutiny to determine its efficacy if it is to become successful. The most convincing proposition under these circumstances would be to encourage learning to take place by creating mechanisms for that learning to thrive. For instance, organisations could encourage workers to shadow those they are expected to learn from, be encouraged to experiment with some tolerance of mistakes, with continuous and repetitive learning exercises to ensure that skills are actually acquired. A knowledge-driven public service organisation that encourages those critical elements will be able to achieve optimal service delivery that is based on empirical evidence and a body of knowledge that ultimately informs shrewd policy choices. In order for organisations to avoid the ignominy of falling into the abyss of dysfunctionality and constantly be the subject of negative audit findings, leveraging all knowledge resources at the organisation's disposal is of paramount importance.

Of course, knowledge management cannot be seen as a panacea to all the ills that that are a constant threat to most organisations in general and public service in particular. However, it will go a long way towards alleviating most of the seemingly intractable challenges that are often cited by the Auditor-General as hampering government from rendering their services; issues such as controls and management systems, to mention just two.

One final point needs to be made. It is with regard to further research. This thesis took its point of departure in the concept of knowledge *transfer.* After all, once development is given as the driving force for learning, it seems self-evident that it will be achieved by transferring knowledge from the few experts to the many uninformed and hence unskilled.

But is that really what should happen? Or more to the point, is that what can happen? Is the very use of the word "transfer" not perhaps the reason why the dissemination of knowledge is not happening as needed and desired? Is the underlying assumption perhaps not false – that knowledge can be transported, i.e. transferred, in the same way as tangible goods? Is

knowledge ever an entity that must or can be "transferred", or is it a capacity to act which the knowledgeable person cultivates him or herself? If the latter is true, the notion of organisational learning, and the dissemination of knowledge (not to use the word knowledge transfer) is in need of a fundamental rethink. In such a rethink the question will not be where to find experts who somehow distribute knowledge by performing their expertise in sight of non-experts. The question will then be what processes and climates an organisation should cultivate which will systemically support employees to engage in their own cultivation of knowledge.

These are advanced and high level questions. But they should be attempted. Because if there is validity in them, it means that many practices today, that are performed under the umbrella of knowledge transfer, are doomed to fail.

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